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CANADA MEDICAL AND SURGICAL JOURNAL.

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Contents.

ORIGINAL COMMUNICATIONS.

Case of Traumatic Tetanus—treated by Nerve stretching, Calabar Bean and Chloral.—By Dr. Drake 145

Cases of Gonorrhœa — treated by Oleum Erigerontis Canadensis. By G. A. Stark, M.D., C.M..... 158

Meeting of the International Medical Congress 160

HOSPITAL REPORTS.

Aneurism of the Arch of the Aorta—Pressure on the Great Veins—Death and Autopsy under Dr. Roddick..... 177

REVIEWS AND NOTICES OF BOOKS.

Cyclopædia of the Practice of Medicine.—Edited by Dr. H. Von Ziemssen, Prof. of Clinical Medicine, Munich, Bavaria, New York, Wm. Wood, & Co. 182

SELECTIONS.

An Iron Renal Calculus..... 181

Differential Diagnosis..... 185

Hospital Gangrene..... 186

Formula for Migriane..... 187

EDITORIAL.

Semi-annual Meeting of the College of Physicians & Surgeons, C. E. 188

Report of the Semi-annual Meeting of the College of Physicians and Surgeons..... 191

Belmont Retreat..... 192

All Communications, Exchanges, and Books for Review, must be addressed to the Editor, GEO. E. FENWICK, M.D., Drawer 386, Post office, Montreal, and Post-paid. Communications for insertion must be received before the 15th of the month.

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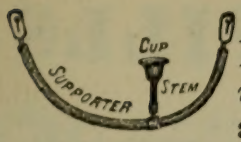

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CANADA

MEDICAL & SURGICAL JOURNAL

Original Communications.

CASE OF TRAUMATIC TETANUS—TREATED BY NERVE-STRETCHING, CALABAR BEAN, AND CHLORAL.

By Dr. Drake.

Reported by Dr. J. C. Cameron, House Surgeon, Montreal General Hospital.

Peter Johnson, æt 28, a light-complexioned, well-nourished, powerful young Swede, was admitted to Hospital August 25th, 1876, complaining of a soreness about the throat, difficulty of swallowing, and a general feeling of stiffness.

Patient is a coachman and general servant. On the 12th of August he stepped on a rusty nail, running it through the outer margin of the left foot, one inch above the metatarso-phalangeal articulation of the little toe. He pulled out the nail at once, and applied turpentine to the wound. It felt sore for a few days, but as it did not prevent him from working he paid no particular attention to it. On the 20th, he noticed that he could not open his mouth as well as usual, when he was taking his food; he experienced some difficulty in swallowing, not pain, but a sensation as if the food went down "too quickly, with a jerk." He found mastication becoming gradually more difficult, and was consequently obliged to confine himself to liquid food; he was frequently bathed in profuse perspiration. These symptoms became daily more marked till the 23rd, when he began to feel pain in the back and shoulders, or rather a

sense of stiffness which made it difficult for him to bend; slight chills came on at night. On the 24th he left work, but still kept up and walked about, although he felt himself growing stiffer and more chilly. On the 25th he was admitted to Hospital complaining of a soreness in the throat, difficulty of swallowing, and general stiffness. He made no mention of his accident, and, being a foreigner, did not give a very clear account of himself. He walked stiffly, but without pain. In the evening he complained of pain in the chest, back, wrists, and ankles; spent a very restless night, complaining loudly of wandering pains all over the body. On the 26th, at the morning visit, trismus and opisthotonos were well marked; he was covered with profuse perspiration, complained of intense pain in his back and neck, had a desire to defecate, but could not. The symptoms rapidly grew worse during the forenoon, regular tetanic spasms set in, the whole body being convulsed every few minutes; during the spasms the teeth were tightly clenched, the arms and legs drawn up and rigid, the back arched in permanent spasm, so that he lay with only the back of his head and his heels touching the bed. He screamed with pain when the paroxysms came on, and could with great difficulty be controlled; had great thirst, but could not swallow a drop. Pupils were widely dilated. The slightest touch or movement brought on a severe spasm. In this condition he was seen at the midday visit by Dr. Drake, who considered the case to be a very severe one. In the *Practitioner* of November 1874, Dr. Sydney Ringer reports a case of traumatic tetanus treated by large doses of Calabar bean successfully; in eighty-six hours 140 grains of the extract were given with the most satisfactory results. In the *Lancet*, some time ago, Mr. Callender remarked on the operation of nerve-stretching in similar cases in the hands of several French surgeons. In the afternoon of the 26th Dr. Drake met Dr. Fenwick in consultation, and from the success of Dr. Ringer's case, and the favorable reports of the nerve-stretching, determined first of all to stretch the left sciatic nerve, and then to administer Calabar bean in large doses. At 4.30 p.m., the patient having been put under chloroform,

Dr. Drake cut down upon the sciatic nerve at the posterior border of the gluteus maximus muscle, hooked out the nerve, seized it with a strong pair of vulsellum forceps and pulled it forcibly downwards. Before the operation the resp. were 17, pulse 86, temp. 98.4°; pupils widely dilated, muscles in a state of permanent spasm. The immediate effect of the nerve stretching was very remarkable. When the nerve was seized with the forceps, the arms and legs were firmly fixed and rigid, the back arched, the head thrown back, and the teeth clenched, although the patient was under chloroform; when the first pull was given, the muscular rigidity immediately disappeared, the limbs, which had been tense and hard, became suddenly flaccid, the opisthotonos relaxed, the jaws could be opened, and the patient lay quietly and without spasm on the bed. The pulse and respiration were not visibly affected by the operation. After being stretched, the nerve was replaced, the wound closed with fine metallic sutures, and carbolized dressing applied. The wound in the foot was slit open with a bistoury, and a few drops of pus let out; oiled lint was applied, covered with a hot linseed meal poultice;—dressing to be changed every four hours. On coming out of chloroform, the patient felt very comfortable and drank a quantity of milk with avidity; neither spasm nor opisthotonos returning, he sank into a quiet sleep. At 5 p.m. the Calabar bean was commenced; ¼ grain of the alcoholic extract was given hypodermically every 15 minutes for five hours, then ½ grain was given every half hour, so as not to disturb him so frequently. At 6.15 p.m. slight spasms returned in the left leg, and he complained of a feeling as if the leg were being violently stretched or pulled all the time; perspiration stood out upon his forehead in beads. 7.30 resp. 20, pulse 80, temp. 99°; urine was drawn off, causing a severe spasm with return of slight opisthotonos; the urine flowed in jets, and was at times propelled a distance of several feet by the sudden contraction of the bladder.

During the night he had two draughts of chloral, grs. xxx, which soothed him and gave him some sleep. The pupils did not become thoroughly contracted about midnight when the

slight spasms which had come on at intervals of about ten minutes since six p.m., and had been gradually becoming less frequent and severe, entirely ceased.

Aug. 27th.—During the night the pupils were kept well contracted; the Calabar bean was pushed till 5.30 a.m., when the breathing becoming very shallow, it was stopped till 7 a.m., after which the injections were recommenced. During the night he was very drowsy, and slept heavily, snoring loudly at times. He complained of a little pain in the back and left leg, and occasionally in the epigastrium, but had no spasm or opisthotonos till 10.50 a.m. He drew up his legs and straightened them out again at will, and was, at his own request, turned over on his right side, when he lay quite comfortably for a time. The urine to the amount of 10 oz., was drawn off at 1.30 p.m., exciting a spasm much less severe than when it was first drawn off. The urine was clear and moderately high coloured. During the day he was somewhat restless, and a dose of chloral, grs. xxv, was given at 11 a.m., 4. p.m, and and 9.30. p.m. It was rather more difficult to keep the pupils contracted, and whenever they began to dilate spasms came on which were never very severe. The temperature ranged between 98° and 100°; the pulse, which kept tolerably stong, between 74 and 124, and the respirations 24 and 48, varying according to the degree to which the bean was pushed. He drank about two quarts of milk during the day with difficulty.

SPASMS DURING THE DAY:

A.M.	P.M.	P.M.	P.M.
10.05	1.30	7.55	9.20
10.20	4.15	8.10	9.30
10.30	4.35	8.25	11.30
11.05	7.30	9.00	

Up to midnight 18¾ grains of the Ext. of Physostig. had been given hypodermically.

Aug. 28th.—During the night he slept pretty well; the pupils were kept well contracted, the injections of half a grain being kept up every half hour. He drank two quarts of milk during the night, and in the morning had the dressings applied, his bed made and his shirt changed, without spasm. During the day at

intervals perspiration broke out, chiefly on the forehead and chest, when the pupils were tending to dilate but disappeared when he became more fully under the influence of the Calabar bean. The urine was drawn off three times, the first time without causing spasm. Chloral was given (grs. xxx,) three times during the day. In the afternoon the bowels were freely opened; he was quite conscious of the motion. He became quite restless in the afternoon and evening; the pupils were constantly tending to dilate, and he was with difficulty kept under the influence of the bean; whenever the pupils dilated or even showed a tendency to dilate the spasms at once returned, and became rather more severe. During the twenty-four hours the temperature ranged between 97.8° and 100.2°; the pulse between 98 and 130; and the respirations between 26 and 34. The spasms occurred at:

A.M.	A.M.	P.M.	P.M.	P.M.
12.30	9.30	12.35	4.15	7.35
12.45	9.45	12.45	4.45	8.05
1.30	10.45	1.00	4.50	8.20
3.15	10.58	1.15	4.55	8.55
3.30	11.10	2.00	5.00	9.50
4.30	11.29	2.08	5.15	10.20
4.50	11.45	2.20	5.30	10.30
5.10	11.50	2.30	5.45	10.40
6.10	12.00	3.05	6.00	10.55
7.30	P.M.	3.20	6.15	11.25
7.45	12.05	3.40	7.05	11.30
8.15	12.25	3.55	7.25	11.45

Up to midnight 42½ grains had been given hypodermically.

Aug. 29th.—During the night the pupils manifested a tendency constantly to dilate; the bean was administered hypodermically, ½ a grain every quarter of an hour as the condition of the patient seemed to require. After midnight, the spasms were slight though frequent; they in fact resembled cramps rather than true spasms. Chloral (gr. xxx) was administered twice during the night; the urine was drawn off once causing slight spasm; the bowels were freely opened twice. Although restless at times, he slept tolerably well. All forenoon and afternoon, the pupils kept dilating and contracting, and the

spasms became very frequent, but not severe. At 2 p.m., the pulse was very shabby, and quite uncountable, the face livid, and the respiration labored. In order to stimulate the heart's action, a dessert-spoonful of whisky was ordered to be given every half hour; in a few hours the pulse became stronger, firmer and of good volume. During the evening he was troubled with flatulence, and kept straining constantly. He passed quantities of gas and urine, and had several stools moderately relaxed. In the evening his pupils seemed to become less inclined to dilate and were kept well contracted with less difficulty. Chloral was given four times during the day. During the twenty-four hours the temperature ranged between 98° and 103.8°; the pulse between 98 and 140, but was for about an hour quite uncountable; the respiration between 24 and 32. The spasms occurred at—

A.M.	A.M.	A.M.	A.M.	P.M.	P.M.
12.30	3.15	9.10	10.55	2.20	6.30
12.40	3.30	9.45	P.M.	3.15	6.50
1.00	4.20	9.50	12.10	4.00	7.30
1.15	5.30	9.55	12.30	4.25	8.45
1.30	6.00	10.00	1.15	4.40	9.40
1.50	6.15	10.05	1.25	4.55	9.50
2.00	6.30	10.20	1.40	5.00	
2.10	7.00	10.25	1.45	6.00	
2.20	8.10	10.35	2.00	6.05	
2.40	8.50	10.45	2.05	6.15	

Up to midnight 67½ grains have been given hypodermically.

Aug. 30th.—During the night he drank two quarts of milk, and had a tablespoonful of whisky every hour. He was troubled with flatus, and kept repeatedly passing wind which always seemed to relieve him. The pulse was frequent but firm and of good volume; the profuse perspiration, lividity of countenance and spasms disappeared. He had only one spasm between midnight and 8.30 a.m. The limbs and body remained quite flaccid, and he slept well during the night. In the forenoon he became restless again, the pupils kept dilating, and the spasms returned numerous and severe. All through the day the spasms seemed to be becoming worse; opisthotonos and general rigidity supervened, and he suffered more pain than at

any time since the operation; profuse perspiration of the head and body again appeared, and he had much more difficulty in swallowing: the hypodermic injections seemed to irritate him greatly and to bring on spasms; both arms and body were becoming very sore.

At 8.30 p.m. 87 grains of the extract of Calabar bean had been given to him by hypodermic injection; at 8.30 the injections were stopped, and the bean was ordered to be given by the mouth in doses of from one to two grains of the extract every half hour. The effect of the change was most marked. The pupils, which had been dilating in spite of increased doses hypodermically, contracted in two hours so much that one dose had to be omitted; the spasms became less severe and far less frequent, and he sank into a quiet and refreshing slumber. During the day the whisky was continued regularly and chloral adminstered every four hours. The temp. ranged between 96° and 103.8°, the pulse between 100 and 146, and the resp. between 20 and 43. The spasms occurred at

A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.
3.40	10.10	11.15	12.05	3.15	5.25	8.50
8.30	10.25	11.20	12.25	3.45	5.40	9.00
8.45	10.30	11.23	12.30	4.15	6.00	9.45
9.10	10.50	11.25	12.50	4.25	6.12	10.00
9 30	11.05	11.30	1.35	4.35	6.20	10.20
9 40	11.10	11.50	2.05	4.45	7.25	10.40
10.00		11.55	2.15	4.55	7.40	11.10
			2.25	5.15	7.50	11.30

Aug. 31st.—During the early part of the night he was very low; the spasms were severe, trismus and risus sardonicus were well marked, the countenance was livid, and the extremities cold, pulse rapid and feeble, and breathing very shallow; at times profuse perspiration broke out. The breathing was so bad at 3.30 a.m. that the Calabar bean was stopped for an hour and a tablespoonful of whisky was given every half-hour; hot bottles were kept to the feet and legs. At 4 a.m. he sank into a gentle slumber, the perspiration soon disappeared, the pulse became stronger and the breathing better, and he slept without spasm until 7.30. During the day the bean was given every

hour in doses of from 1 to 2 grains along with a dessertspoonful of whisky. The pupils were kept well contracted; he slept a great deal, and when he awoke called loudly for milk. He managed to drink one gallon of milk during the day. Chloral was administered about every four hours.

The temp. has ranged between 99°4 and 103°, the pulse between 88 and 140, and the resp. between 16 and 54. The spasms occurred at

A. M.	A. M.	P. M.	P. M.	P. M.	P. M.
12.40	3.55	12.15	3.45	6.55	9.30
1.05	4.10	12.30	4.00	7.40	10.30
1.25	7.30	2.00	4.07	7.53	10.55
2.00	9.30	2.30	4.48	8.20	11.20
2.35	10.30	3.40	5.30	8.30	11.40
3.15	11.25				

Up to midnight he had taken by the mouth 62 grains of the extract.

Sept. 1*st.*—Passed a good night; slept well; spasms less frequent and less severe; pupils were kept well contracted; drank two quarts of milk during the night. Throughout the day, he had a number of motions, dysenteric in character; the bowels seem to be becoming very irritable; an enema of tinct. opii m xxxv. in a tablespoonful of starch was administered, with marked advantage. The urine was drawn off three times, twice without spasm. A draught of chloral (grs. xxx) was given four times. The pupils showed a tendency to dilate between 4 and 6 p.m., but before and after that they were well contracted. He moves his limbs freely; there is no sign of paralysis of the extremities. The temp. ranged from 98.6° to 102°, the pulse from 100 to 140, the resp. from 22 to 34. The spasms occurred at

A. M.	A. M.	A. M.	P. M.	P. M.	P. M.	P. M.
12.20	3.50	8.00	1.30	4.45	5.25	6.00
1.00	4.10	9.30	2.25	5.00	5.30	7.35
3.00	7.00	9.45	4.00	5.20	5.45	9.10
		11.10				11.45

Up to midnight 162½ grains had been given by the mouth.

Sept. 2*d.* — Was excited and noisy for about an hour between 3 and 4 a.m.; the whisky was reduced to a tablespoonful every hour, and chloral was given every two hours. After the change was made he slept quietly. During the day

chloral was given twice ; the urine was drawn off four times ; the dysenteric condition of the bowels returning, another enema of starch and opium was given. The pupils were kept well contracted, and the spasms were very slight and far apart. The temp. ranged from 98.4° to 102°, the pulse from 96 to 102, and the resp. from 16 to 44. Spasms occurred at

A. M.	A. M.	A M.	A. M.	A. M.	A. M.	P. M.
12.05	1.00	1.22	2.50	4.00	5.05	3.45
12.30	1.10	2.15	3.20	4.10	11.30	

Up to midnight 162½ grains have been given by the mouth.

Sept. 3rd.—Passed a very comfortable night ; had a number of little cramps and twitchings which were scarcely noticeable. The dysenteric symptoms have disappeared and the motions have become quite firm. At 9. a.m., he had a rigor lasting ten seconds ; hot bottles were applied and he was relieved. Perspired freely during the night. At 4 a.m. he had a very severe spasm, with general rigidity, lividity of the face, dyspnœa and pain, After a dose of chloral he became much easier and fell asleep. Throughout the day he continued very restless, and although few actual spasms occurred, trismus and general rigidity were quite marked : he swallowed but little and with difficulty ; perspired freely, and passed several slimy motions. At midnight he had another severe spasm, with general rigidity, brought on by draining off his urine.

The temperature has ranged between 98.2° and 100° ; the pulse between 100 and 130 ; the respirations between 18 and 40. The spasms occurred at

A.M. 2.00 9.30 9.50. P.M. 2.00 6.15 11.25 12.00.

Up to midnight 218½ grains have been administered by the mouth.

Sept. 4th. — After midnight, the stiffness relaxed, and although restless at times, he passed a tolerably good night. In the afternoon he seemed weak and much exhausted ; the whisky was accordingly increased. At 3 p.m. the bean was stopped on account of the feebleness of his respiration. At 3.45 his pupils which had been well contracted began to dilate, perspiration broke out and swallowing became difficult ; at 4 p.m. the pupils were widely dilated, and he had a severe spasm. The bean was given again in two grain doses every half hour, and

his pupils began at once to contract, the perspirations and spasms disappeared and he fell asleep. During the day he had several dysenteric motions ; an enema of starch and opium was given at 9 p.m. His pupils were well contracted,but his pulse was shabby and he seemed very weak ; the bean was discontinued, and only whisky given to 11.30 when a two grain dose had to be given, for his pupils had become again widely dilated, and a severe spasm with general rigidity and profuse perspiration had come on. The temperature during the day ranged between 97.6° and 101° ; the pulse between 106 and 130 ; the respirations between 24 and 40. Spasms occurred at

A.M.—4.00 9.00. P.M.—3.00 3.30 4.00 4.10 4.50 5.25 7.45 11.35.
Up to midnight 271½ grains have been given by the mouth.

Sept 5th.—Throughout the night he remained very weak ; the breathing was bad, the pulse feeble, the spasms severe and attended with greater opisthotonos than had been noticed since the operation. One spasm was so severe and sudden, that it jerked him completely out of bed. He swallowed with great difficulty. On the whole, it has been the most anxious time since the operation ; the bean could not be given regularly on account of the general prostration and the state of the pulse and respiration. During the day, by dint of giving whisky liberally, chloral every four hours and Calabar bean cautiously, the pupils were kept well contracted, the strength gradually restored, the pulse, respiration and ability to swallow improved. At 1:30 p.m., as the temperature had fallen to 95·2° in the axilla, it was found necessary to take the temperature in the rectum, and it was taken thus throughout the rest of the case. The urine dribbles away ; bowels have been somewhat relaxed. The temperature ranged between 95·2° in the axilla and 100·6° in the rectum ; the pulse between 100 and 120 ; the respiration between 18 and 40. Spasms occurred at

A.M.	A.M.	A.M.	A.M.	A.M.	P.M.
12.05	12.50	3.05	4.25	5.55	12.15
12.30	12.58	3.20	5.07	7.15	8.30
12.35	1.35	3.35	5.15	9.05	10.00
12.45	2.50	4.00	5.25	10.45	

Up to midnight, 341½ grains have been given by the mouth.

Sept 6th.—During the night the breathing became shallow and irregular, and the bean had to be discontinued from 2 a.m.

till 4.30 a.m., whisky was given freely all night, and chloral every four heurs, when the pupils became dilated about 4 a.m. Spasms came on but they ceased after one dose of the bean had been given. In the afternoon the pulse became irregular, feeble and intermitting; one ounce of whisky was given every half hour for four hours, and the pulse became stronger and more regular. All day the bean had to be given cautiously, the dose being increased, diminished or omitted according as the state of the pupils, pulse and respiration demanded. He had several motions, inclined to be dysenteric; an enema of starch and opium was given, with relief. Temperature has ranged between 98° and 100.2° in the rectum; the pulse between 60 and 140; the respirations between 28 and 44. Spasms occurred at

A.M.	A.M.	A.M.	P.M.
4.00	4.45	7.50	7.00
4.15	4.52	3.30 P.M.	9.00
4.30	7.40	5.00	11.38

Up to midnight 398½ grains have been given by the mouth.

Sept. 7th.—During the night, the bean could be given in doses of one grain only; consequently, the pupils manifested a tendency to dilate; trismus was well marked, and he had great difficulty in swallowing. He drank only one-and-a-half pints of milk during the night. During the day he became somewhat stronger, the pupils were well contracted, he had no spasms or rigidity, and he drank four pints of milk quite eagerly, and without difficulty. He is becoming somewhat troublesome and restless; tosses around a great deal, and wants to get up out of bed. He speaks rationally, and seems cheerful. At 6 p.m. he was moved to another bed; slight rigidity occurred, but no distinct spasm. The bowels seemed irritable, and were opened several times during the day; the urine passes away in bed. The temperature has ranged from 99° to 101° in the rectum; the pulse from 100 to 140; the respirations from 28 to 40. Only one spasm occurred during the 24 hours—at 4:28 a.m.

Up to midnight, 445¼ grains have been given by the mouth.

Sept. 8th—Was somewhat restless during the night; slight opisthotonos and general rigidity was noticeable at times; the

pupils were kept tolerably contracted; the bowels were very irritable; chloral was given every four hours, and the bean in one grain doses every half hour; he slept heavily during the night. During the forenoon the general rigidity disappeared, and he seemed quite comfortable. At 11:40 a.m. he had a severe spasm, with profuse perspiration. In the afternoon, a good deal of twitching of the eyelids was noticeable. At 9 p.m. he was feeling very comfortable; pupils were well contracted, no rigidity or spasm had come on since 11:40 a.m.; he was quite talkative, planning what he would do when he got well. At 9 p.m. I was called away to attend to some other duties, and I did not see him again till 11 p.m.; I found him then quite rigid, breathing very shallow, 28 per minute; pulse firm and good, beating 100; temperature, 100°. Pupils were widely dilated, and he was covered with a cold perspiration. I was informed that shortly after I left him at 9 o'clock, rigidity began to come on, and he found it difficult to swallow; at 9:30 one grain of the bean was given with great difficulty, but after that time the nurse found it impossible to give him either the bean or whisky; the pupils began to dilate, spasms set in, and the general rigidity increased. Finding it impossible to get him to swallow anything, I determined to give him a hypodermic; before I could do so, however, a spasm seized him, he became quite rigid, the chest became fixed, and breathing ceased; the pulse was then beating at the rate of 90 per minute, and was firm and of good volume; it beat on quietly for a few seconds, and then stopped. At 11:10 p.m. he was dead. Artificial respiration was kept up for some time, but without avail. The temperature ranged between 97.4° and 101.2°; the pulse between 76 and 140; the respiration between 18 and 40. Spasms occurred at

A.M.	A.M.	A.M.	A.M.	P.M.	P.M.
2.00	4.00	5.30	11.40	10.30	11.00
3.30	5.00	9.30	10.00 P.M.	10.49	11.10

If I could have been with him after 9 p.m. the fatal termination might have been warded off, for he had come safely through very much worse spasms when he was far more prostrated. He was so much stronger and better than he had been

for days, that we were all confident that he would recover. The inattention and culpable neglect of one of the attendants is no doubt in a great measure answerable for the poor fellow's death. It was ascertained, when it was too late, that his whisky, upon which we relied to maintain the heart's action and counteract the depressing effects of the bean, had not been given to him regularly nor in the quantity prescribed. A portion of it was drunk up by one of the attendants. This most unfortunate affair is much to be regretted, as the case was progressing so favorably and bade fair to be a triumph for nerve-stretching and Calabar bean.

Throughout the case, spasms invariably came on when the pupils began to dilate, and as invariably disappeared when the pupils contracted. Perspiration was always more profuse when the pupils were dilated and spasms existed, and it generally ceased with the spasms. The pulse and respiration were markedly depressed by the bean; the pulse at times became shabby, irregular, intermitting, and once or twice quite uncountable; the respiration became slower, more labored and shallow, and at times irregular, one deep breath being followed by one or two short quick ones. The chloral was very useful; it seemed to quiet the great restlessness and bring on refreshing sleep. It was given throughout the case whenever the patient became very excited or restless, and ℥ij to ℥iij were given daily.

Whisky was invaluable. As a cardiac stimulant it worked marvels. The pulse was often reduced in frequency, improved in quality and volume by increasing the whisky and diminishing the bean. By carefully and judiciously regulating the doses of the bean and the whisky, the pupils were on the whole kept pretty well contracted, without dangerously interfering with pulse or respiration. Throughout the case, the bean caused no irritability of the stomach; there was never any vomiting, or even a feeling of nausea; there was considerable irritation of the intestinal tract, for the bowels became much relaxed, and the stools contained blood and mucus. There was no paralysis of the extremities noticeable; on the contrary, he rolled around, tossed his arms and legs about quite freely, and

the last day could with difficulty be prevented from getting out of bed. The total quantity of the bean given in the case was:

By hypodermic injection.....	87 grains.
By the mouth.....	489½ "
Total.....	576½ grains.

The preparation used was the alcoholic extract manufactured by "McKeason & Robbins" of New York. It was obtained chiefly from Mr. Henry R. Gray, druggist, and was a thoroughly reliable article.

Autopsy.—48 hours after death, cadaveric rigidity still well marked. Lungs very much congested; gorged with blood. Heart: left ventricle contracted; right side filled with dark fluid blood; organ otherwise healthy. Liver and kidneys healthy. The sciatic nerve was removed from the popliteal space to where it entered the pelvis. Where it had been seized by the forceps to stretch, the marks of the teeth of the forceps were evident from ecchymoses. The texture of the nerve did not appear to be injured here or above this spot. Felt as hard as below. No stiffening nor tearing evident. Below this spot no change whatever in the nerve was evident; above, the sheath was very much injected. The branches of the sacral plexus in same condition. The spinal cord was removed from the fifth vertebra to the sacrum. Between the seventh dorsal and the first lumbar vertebra there were found spots of extravasation of blood in the canal, outside of the membranes on the posterior side of the canal. The membranes of the cord were much injected.

CASES OF GONORRHŒA—TREATED BY OLEUM ERIGERONTIS CANADENSIS.

By G. A. Stark, M.D., C.M., Milwaukee, Wis.

The following is a very brief account of a few cases treated by Ol. Erigerontis Canadensis. They are not given in order of time, but as they come to hand and are numbered for convenience.

Case 1. Applied for advice Sept. 26th, 1872. Diagnosed

Gonorrhœa. Discharge had been present two weeks. I will not record other symptoms, as they were those of which patients similarly afflicted usually complain.

Treatment.—Ordered a bottle of the fluid citrate of magnesia to be taken at bed-time and the following:

℞. Ol. Erigeron. Canadensis, ℥ij; Syr. Simplicis ℥ij; M. Shake the bottle well before using. Sig: Teaspoonful every four hours. Diet was also regulated.

Saw the patient three days afterward. The discharge was not present. Said he had seen no discharge since last night. Continued the treatment for a week. No return of discharge. Other symptoms subdued. Discharged.

The above combination (scarcely a mixture, as when agitated it only seems to be mixed),when flavored with essence of wintergreen and taken in water, is very agreeable to the taste.

Case 2.—Applied for treatment April 24th, 1873. Discharge had been present for a week, copious.

Treatment as in case 1. On the 26th the patient reported that the discharge had ceased. Said the night of the 24th and 25th it literally ran away. Continued the treatment a week longer. No return of discharge. Patient discharged.

Case 3.—Applied for treatment July 7th, 1873. Discharge had been present for three weeks.

Treatment same as above. Discharge ceased in a week.—Continued treatment for four days longer. Discharged.

Case 4.—Applied for advice July 13th, 1873. Same treatment as above. Patient discharged in four weeks.

Case 5.—Applied for advice July 14th, 1873. Discharge present for about six weeks.

Treatment same as in case one. Discharge ceased in a week. Discharged in ten days from beginning treatment.

Have also given the oil in combination with sweet spirits of nitre and simple syrup; with fluid extract of buchu, sweet spirits of nitre, and simple syrup; with oil of sandal wood, alcohol and simple syrup, &c. The formula for the last named combination is as follows:

℞. Ol. Erigeron, Canadensis ℥iij; Ol. Lig. Santal, ℥jss; Spt.

Vini. Rect. ℥j; Syr. Simplicis ad. ℥iij. M. Flavor with the essence of wintergreen. Shake the bottle before using.

Sig: Teaspoonful in a little water every 2, 3 or 4 hours as deemed necessary.

MEETING OF THE INTERNATIONAL MEDICAL CONGRESS.

Monday's Proceedings.

At twelve o'clock on Monday, September 4th, the International Medical Congress was called to order by Professor S. D. Gross, President of the Centennial Medical Commission, in the hall of the University of Pennsylvania. There were, at a rough estimation, four hundred and fifty gentlemen in the audience. The Right Rev. Bishop Stevens, of Pennsylvania, opened the exercises with prayer, after which Professor Gross delivered an eloquent address of welcome, which we regret we cannot give at length. We merely give an extract, in which he dwells with natural pride on the progress of the country as exemplified by such an occasion.

"In its wide range, the present congress is without a parallel. Similar bodies have repeatedly met, but none on so grand a scale or with such a cosmopolitan outlook.

"In organizing the congress the commission may have been guilty of undue partiality towards their own country. Perhaps such a tendency was, after all, to show the world what the century since the establishment of our independence as a free and sovereign people has accomplished for scientific medicine. For this purpose, topics illustrative of the progress and present condition of the different branches of medicine in the United States have been assigned to gentlemen of acknowledged rank in the profession in different sections of the Union. These exercises will, it is believed, add greatly to the interest of the occasion. Time was when we had no medical literature, no medical science; when we were utterly helpless, and wholly dependent upon the aid derived from our European brethren, especially the English,

whose language, practice, and habits we made our own. The poverty of the country in these respects cannot be better illustrated than by the fact that we had no native works on medicine and the collateral sciences until after the commencement of the present century. Many of you will recall the words of the great English lexicographer, who, in 1769, in speaking of the American colonies, exclaimed, 'Sir, they are a race of convicts, and ought to be thankful for anything we allow them short of hanging.' The Abbé Raynal, writing in the latter part of the last century, declared that America had not yet produced a single man of genius; and the exclamation of a celebrated Scotch reviewer, uttered at a more recent period, 'Who reads an American book, who goes to an American play, or who looks at an American picture?' is still fresh in the memory of many of the present race of men. The discourses which will be delivered before you on the progress of American medicine will serve to show that the profession in the United States has earned for itself an enviable reputation, and that it is fully abreast with all the other pursuits that adorn the human mind and shed lustre upon the scientific character of the nation. They will serve to show that we have passed the period of medical provincialism, and that we stand upon a lofty platform, to which we need not be ashamed to invite the representative men of the profession of foreign countries, however illustrious, or however far advanced in the arts of civilization."

Following the address of Dr. Gross, the names of a committee of thirteen, who had been nominated by a committee appointed by the commission, were submitted to the congress for acceptance. The duties of this committee were the nomination of the officers of the congress. Nine of them were Americans, four were Europeans. Their appointment was confirmed by unanimous vote of the congress. Dr. Austin Flint, of New York, was then introduced as the reader of the address on medicine. This interesting address, of which we give an abstract elsewhere, was listened to with great attention, and, at the close, Dr. Gross made reference to the modesty which led Dr. Flint to omit all mention of his own celebrated writings. The address was then referred to the committee on publication.

The thanks of the congress were tendered Dr. Gross for his address, and a copy of it was asked for publication.

The committee on nominations next reported their choice of the following gentlemen as officers of the congress:—

President: Dr. S. D. Gross, Philadelphia.

Vice-Presidents: Dr. Paul F. Eve, Tennessee; Mr. Joliffe Tuffnell, Dublin; Dr. W. L. Atlee, Philadelphia; Dr. C. Lange, Copenhagen; Dr. J. Johnson, St. Louis; Dr. F. Semeleder, Vienna; Dr. Hunter McGuire, Virginia, Dr. Johan Hjort, Christiania; Dr. S. G. Richardson, New Orleans; Dr. William H. Hingston, Montreal; Dr. J. White, New York; Dr. H. Miyake, Japan; Professor N. R. Smith, Baltimore; Professor Rudnew, St. Petersburg; Dr. J. M. Toner, Washington, D. C.; Professor Heuter, Griefswald; Dr. G. L. Collins, Rhode Island; Dr. R. F. Hudson, Australia; Dr. H. Gibbons, California; Dr. P. De Basieux, Belgium; Dr. N. S. Davis, Chicago; William Adams, Esq., London, Eng.; Dr. L. A. Dugas, Georgia; Professor Simpson, Edinburgh; Dr. J. K. Bartlett, Wis.

Honorary Vice-Presidents: Surgeon-General Barnes, U.S.A., Surgeon-General Beale, U. S. N.

Treasurer: Dr. Casper Wister, Philadelphia.

Secretary-General: Dr. I. Minis Hays, Pennsylvania.

Assistant Secretaries: Dr. William B. Atkinson, Dr. R. J. Dunglison, Dr. R. A. Cleemann, Dr. W. W. Keen, Dr. Bertolet.

Section of Medicine: Chairman, Professor A. Stillé; Secretary, Dr. J. Ewing Mears.

Biology: Chairman, Prof. J. C. Dalton; Secretary, Dr. J. Tyson.

Surgery: Chairman, Prof. Joseph Lister; Secretary Dr. J. H. Packard.

Dermatology and Syphilology: Chairman, Dr. J. C. White; Secretary, Dr. A. Van Harlingen.

Obstetrics: Chairman, Professor Barnes, London, Eng,; Secretary, Dr. William Goodell.

Ophthalmology: Chairman, R. Brudenell Carter, F.R.C.S., London; Secretary, Dr. J. Green.

Otology: Chairman, Dr. C. J. Blake; Secretary, Dr. H. N. Spencer.

Sanitary Science: Chairman, Dr. Stephen Smith; Secretary, Dr. E. M. Hunt.

Mental Diseases: Chairman, Dr. J. P. Gray; Secretary, Dr. W. Kempster.

Dr. Gross, on taking his seat, thanked the congress for the honor conferred on him, and said that nothing would be dearer to him during the remainder of his life than to have presided over their deliberations. He considered it was an honor not solely bestowed on him, but as a tribute to the profession of Philadelphia, who had been so instrumental in organizing this congress. To preside over such a body is an honor of no ordinary kind.

The meeting then adjourned to meet at ten o'clock on Tuesday.

Tuesday's Proceedings.

The International Medical Congress reassembled at ten o'clock on Tuesday morning in the chapel of the University of Pennsylvania, West Philadelphia, Dr. S. D. Gross, President, in the chair.

Dr. I. Minis Hays announced that up to three o'clock, Monday, the names of about three hundred delegates were registered.

Next in order came the reports from sections, which were read.

Dr. T. G. Richardson, of New Orleans, moved that the congress be not held responsible for the reports of the sections, and Dr. Nathan S. Davis, of Chicago, moved that the reports be merely accepted and referred for publication. Both motions were agreed to.

Congratulatory letters from foreign societies were then read, after which were then read invitations to delegates to visit the university buildings, the new hospital of Jefferson College, the College of Physicians, and the Academy of Natural Sciences. It was then announced that Room 4, in Judges' Hall, Centennial grounds, had been reserved for the use of the delegates.

The committee on nominations presented the following additional report, which was adopted:

Committee on Publication (with power to choose its chairman and an editor): Dr. J. H. Ashhurst, Jr., Dr. R. J. Dunglison, Dr. William Goodell, Dr. J. H. Hutchison, Dr. Caspar Wister.

Treasurer: Dr. Caspar Wister.

Vice-Presidents of the sections: Medicine: Dr. R. P. Howard, Canada; Dr. J. J. Woodward, U. S. A.

Biology: Dr. A. Flint, Jr., New York; Dr. F. W. Campbell, Canada.

Surgery: Dr. J. A. Grant, Canada; Dr. J. Ashhurst, Jr., Philadelphia.

Dermatology and Syphilology: Dr. S. Engelsted, Copenhagen; Dr. E. Shippen, U. S. N.

Obstetrics: Dr. A. Simpson, Edinburgh; Dr. W. H. Byford, Illinois.

Ophthalmology: Dr. William Thomson, Philadelphia; Dr. H. W. Williams, Boston.

Otology: Dr. A. Buck, New York; Dr. C. J. Blake, Boston

Sanitary Science: Dr. J. S. Billings, U. S. A.; Dr. H. B Baker, Michigan.

Mental Diseases: Dr. I. Ray, Philadelphia; Dr. E. Grissom. New Orleans.

Dr. Bowditch delivered an address on hygiene.

The sections met at three P.M. In the section on Surgery Prof. John F. Hodgson, of St. Louis, read a paper on Antiseptic Surgery. He defined septicæmia, and referred to the views of Rindfleisch, Tyndall and Pasteur. Tyndall concludes that bacteria are irregularly diffused through the air; hence the difference in hospital experience in various sections. In some there is more septicæmia, in others less. In septicæmia the blood contains elements of putrefaction, and the purulent or putrescent elements are derived from fluids. Absorption, as asserted by Billroth, takes place most readily in the early stages of inflammation and in recent wounds. Diseased skin and wounded surfaces take up these matters readily, yet the latter do not pass through healthy granulations. This has been proved by experi-

ment. Putrid pus is found in abscesses in many parts of the body. A destructive inflammation may originate in these collections, the surrounding walls of the cavities may melt away, and septicæmia, following a large flow of putrid pus, is probably due to fresh inflammation in the walls of the abscess or cavity. Debility, fatigue, and the like, induce these changes.

Animals fed on sulphites are not so liable to septicæmia as animals otherwise fed. Any substitute that arrests putrefaction is antiseptic. Cotton as dressing is not reliable, because we cannot be sure that it is free from bacteria. Heating the wool or diffusing gases through it (Lister's method) may free it from germs. Charcoal, clay, chalk, Peruvian bark, and pulverized madder-root are all useful, but not absolutely sure. Caustics destroy the living organisms upon which putrefaction depends. Currents of dry air, by desiccating the fluid from wounds, prevent absorption of putrefying matter. Practice is infinite in variety. One practices isolation; another, ventilation; another watches over the wound; another seals the absorbing surface. One leaves wounds open; another washes and scrubs; another plasters and daubs. All this shows, at any rate, the necessity of great care in protecting wounds. We see, too the hopelessness of preventing the entrance of bacteria by plasters, powders, or fluids. If we can keep septic matters within bounds we prevent septicæmia. We see this in washing out wounds or inflamed uteri.

The antiseptic ligature cannot be ignored. It becomes absorbed and organized. Lister says that we really surround vessels with living animal tissue. Epithelial cells, as is well known, after their removal from their place of origin, can proliferate. Why, then, cannot animal ligatures receive and become organized when around vessels?

Dr. Paul F. Eve uses the tendons of the deer. They become absorbed.

The entrance of septic germs may be prevented, but only for a time. Actual prevention requires such exact care as will be seldom seen. Practically the conditions to be met are so difficult as to make us nearly powerless. Germs having been found

under dressings so ingenious as those of Lister, it shows how nearly impossible it is to prevent their contact with wounds.

Professional experience teaches us that, as Billroth asserts, absorption by granulating surfaces does not take place rapidly enough to cause septicæmia. It takes place *before* granulation begins.

Drainage tubes, water baths, and other rapid means of cleansing wounds will prevent absorption.

The paper being concluded, Dr. Hewson, of Philadelphia, related his experience with various dressings, finally adverting to the earth treatment, with which he has been very successful. He thinks water dressings and douchings convey germs, and agrees with an English author who says that all fluids as dressing are bad for this reason. For ten years he has not used ligatures, but acupressure and torsion, and thus one source of putrescence is avoided. Dr. Hewson now removes dressings as infrequently as possible, covering wounds with blue paper, which, he thinks, excludes rays of light. During the past few months he has used salicylic acid, but has not allowed wounds to be washed nor dressing to be disturbed when not soaked by the discharges. At present he finds nothing so satisfactory as salicylic acid. He finds, too, that it relieves pain.

The great event of the day was the discourse by Professor Lister in the discussion that followed this paper. He spoke for three hours, during which he received the most unwavering attention. He first referred to the great trouble which attends a perfect use of the antiseptic method. He acknowledged the wearying care attendant upon its use, but expressed his honest belief that there did not exist a medical man who would not be faithful in carrying out any form of treatment which promised to help a patient. He described an operation by which he recently cut out large wedge-shaped pieces from the two femurs of a cripple, in order to straighten his limbs. To do this without strict antiseptic treatment would make success impossible.

Referring to wounds on the head, he said that to remove dressings after days in which they were left untouched, and to find no pus, but fresh cicatrices, was a new era in surgery. This

cannot be done without antiseptic treatment. To open the spine, remove carious bone, and restore the patient to health cannot be done without strict antiseptic treatment. To open an acute abscess, press out the last drop of pus, and see no more form can only be accomplished by the antiseptic method. Unless we use this method we cannot safely tie large arteries without deep-seated suppuration. "Indeed," said he, "I should be exceedingly sorry to apply any ligature without strict antiseptic treatment. We need have no hesitation in expressing the belief that although we may have good healing without antiseptic treatment, we cannot thus secure the best results. Antiseptic surgery is dealing with surgical cases in such manner as to prevent putrefaction. When I read Pasteur's original paper I said to myself, 'Just as we may destroy lice in the head of a child who has pediculi, by poisonous applications which will not injure the scalp, so, I believe, we can use poisons on wounds to destroy bacteria without injuring the soft tissues of the patient.' Putrefaction may be caused by an individual himself, because of his feeble condition. In simple fractures, even, we have a serious wound. If we could only see it we should say. 'Here is dead tissue. It must be poulticed to help its removal. I say in simple fractures are injuries of all degrees.

"If injury follows the opening of an abscess, it is not due to the admission of matter from without, but to the effect upon the pyogenic membrane, which gives it power to absorb, as it did not while intact. So says Billroth. But we did not need to have Billroth tell us that granulations do not absorb, and that putrescent absorption occurs before granulation. I said this in works of mine years ago. We all know how when water dressings are removed from granulating surfaces, the whole ward will stink, and yet the granulations do not absorb. We knew this long before Billroth wrote. The cause of the mischief in the opening of abscesses without the antiseptic treatment is that the pyogenic membrane is not in a condition of granulation. But in acute abscesses we have a granulating surface, just as we have in recent wounds. It is not so in chronic abscesses. Many abscesses do not form pus at all until they are opened. They

are not then in a condition of granulation, but in consequence of their chronicity they can absorb. Granulations covered by epithelium develop in proportion to the amount of epithelium. In pyogenic membranes the surface will absorb in proportion as it resembles a sore with the granulations stripped off. I have seen a patient die within twenty-four hours, and before the membrane had time to granulate, by absorption of putrescent matter, and although the fluid discharge was clear and not yet pus, it stunk."

Professor Lister then showed his common and most reliable dressing. He uses carbolic acid, but insists that it be perfectly pure. That which makes carbolic acid unpleasant to the smell is cresyllic acid. "If a solution of acid and water be not clear, the cloud is caused by insoluble carbolic acid, and this portion will irritate the hands if rubbed upon them. But a perfectly pure solution will not do this. Carbolic acid has the property of penetrating through many, even oily, substances and will cleanse more perfectly than anything else we know." Lister likes salicylic acid, but prefers carbolic because more volatile and hence more searching. He then showed his ingenious spray producer, which is so arranged that the spray can be directed at any angle upon a wound without the aid of an assistant. He begins his dressing by first requesting his patient to cleanse the injured part by washing. He used to excise the carpus. Now he does not like the operation. In case of injury in which there is great mobility of the wrist, he makes two or more free incisions into the joint, keeps the wound open, and uses a drainage tube, with good results. The finger-nails should always be cleaned before the hand or finger is introduced into the body. Nothing of this sort should be neglected. Be sure not to introduce anything into the wound not cleansed by the carbolic acid lotion of one part of acid to twenty of water.

Lister uses a coarse netting dressed with a mixture of carbolic acid one part to resin five parts. He first lays upon the wound a piece of oil silk well varnished with copal varnish and wet in the carbolic-acid lotion. He does not use this in opening abscesses, because he does not wish them to heal. If the gauze

went first upon the wound it would irritate and cause a flow of pus, but if the oil silk be first laid on we may leave the dressing for a week. The trouble is great, but it pays. If during an operation an instrument be laid on the table it should not be again used until it has been dipped into the carbolic-acid lotion. Those who use the method do this instinctively. The gauze is next laid on, first being dipped into the carbolic-acid lotion. The remainder of the dressing, already prepared of layers of calico, oil silk and wadding, must not be laid on without first protecting it by gauze dipped into the lotion, because having been lying upon the table it may be covered with germs. All this is done under a cloud of spray, and when the dressing is changed it must be done under the spray, and one must see that this plays between the dressing and the skin of the patient. The whole is bound on by a roller of silk gauze moistened in the solution.

Lister then at great length, explained his own experiments and those of others with milk, water, urine, and other fluids, variously protected from bacteria by covers, or by boiling, and he showed how germs may find entrance into the fluids, and how these fluids may be protected from them. In regard to bacteria found in freshly voided urine, he said that he believed that a healthy mucous membrane in the urethra prevents the development of bacteria. In lesions of the membrane, if it be washed by a solution of water and carbolic acid, and the penis be washed in the solution and a cap soaked in the solution be put on, the urine will not change in any respect. He then described his catgut ligature and his method of preparing it. He at first tried chromic acid, but that substance made the ligature too hard. He then tried glycerine, chromic acid and water; next, chromic acid and carbolic acid; now he uses chromic acid, glycerine, water, and spirits of wine.

Professor Gross then said that for years he has prevented irritative fever in patients who had chronic abscesses, without the antiseptic method, by putting them at once under the influence of anodynes and keeping them thus for several days.

In reply to a question as to the use of the antiseptic treatment on abdominal lesions, Lister mentioned a case in which the

bowel protruded and lay outside the cavity for half an hour, covered with a cloth dipped in the carbolic-acid solution. The bowel was returned and there was not the slightest disturbance of the peritoneum. All operations are done under spray. He himself never did ovariotomy because there was an ovariotomist in his hospital, but all of his six colleagues, with one exception, employed the antiseptic treatment as carefully as he himself, and their success is in proportion to the amount of care they use. Lister said many other things of interest, but lack of space will not admit them here. He spoke three hours and kept the attention of his audience to the end. He explained away the report that bacteria had been seen under his dressings, by saying that the report was started by Ranke, Volkmann' assistant in Halle, who thought he had discovered bacteria, but, when Ranke came to Edinburgh, Lister showed him that these supposed bacteria were only a microscopical illusion. a false impression caused by a movement of the fluid in the field of the microscope, which movement was communicated to particles of inanimate matter which resembled bacteria. Ranke confessed his error.

In the Section on Medicine, Dr. J. J. Woodward read his paper on typho-malarial fever, and answered the question, " Is it a special type of fever ?" in the negative. Curves which he has constructed show that this form of fever occurs most intensely in autumn. Some sections, as New England, New York, West Virginia, and others are free from this fever, but it prevails in the Southern States and on the Atlantic coast, increasing as we go south. Throughout all the great regions occupied by our armies in the late war, these fevers prevailed with excessive force ; disordered livers and big spleens were abundant.

Typhoid fever is more frequent in the North than at the South, but exists everywhere. It decreases as we go south, but areas occur in which it is prevalent. Liebermeister compared the statistics of typhoid fever, and found it generally autumnal, except in Milan. Dr. Woodward thinks that Liebermeister's curves represent the annual course of typhoid in America, and has addressed the question to secretaries of boards of health all over the country, but has not yet had time to analyze their

replies. He thinks that typhoid rages most from September to November. In numerous districts of America intermittent and remittent fevers once prevailed. The intermittent fevers decreased, and remittent took more and more frequently the form of typhoid fever. When the periodical fevers form epidemics, the typhoid retires until they disappear.

"Is typho-malarial fever a special type of fever?" Dr. Woodward's opinion is that it is not, but only a hybrid of old and well-known conditions. The essential point is the recognition of hybrid or complicated forms of typhoid and malarial fevers. The scorbutic element was only the accident of our war. Dr. Woodward still believes that simple typhoid fever and simple remittent did occur, but to what extent has not been tabulated.

He closed his paper by quoting leading men who accept his theories.

In the Section of Medicine the afternoon was mainly occupied in discussing the question as to the duality or unity of croup and diphtheria. The majority were decided disciples of the dual theory.

The paper on Medical Teaching, by Professor Reid, of Halifax, advocated the greatest simplicity in teaching, in the use and number of terms. The paper, though clear in matter and good in quality, was so elementary in character that it was voted that it should not be reported to the general meeting.

In the Section on Obstetrics the papers for the day were read and warmly received. An extra paper on Dressing of the Pedicle in Ovariotomy was also read, and gave rise to the usual long discussion.

In the Section on Dermatology the question, "Are eczema and psoriasis local or constitutional manifestations?" was discussed in the paper read by Dr. Bulkley. The unanimous decision was in favor of the constitutional character of these affections.

Your reporter failed to hear the probably interesting paper on the Excretory Functions of the Liver, read by Dr. Austin Flint, Jr., before the Section on Biology.

This section listened to Professor Johnston's paper on Micros-

copy of the Blood. It was stated during the reading of the paper that there are two varieties which have circular red blood corpuscles.

The discussion which followed settled into consideration of the old question concerning the ability of microscopical experts to distinguish the blood corpuscles of man from those of animals. The ground taken by Dr. Richardson is that if the question be narrowed down to whether this blood be that of man or of sheep, the microscope will reveal the difference without failure. Nothing new was developed by the discussion.

The Obstetric Section listened to Dr. Byford's paper on Uterine Hæmorrhage. The remaining sections were but poorly attended.

Monday evening, the physicians of Philadelphia gave the delegates a reception at Judges' Hall in the Centennial grounds.

The two receptions given by Drs. Thompson and Wilson were fully attended and very elegant in character.

Wednesday's Proceedings.

The International Medical Congress reassembled this morning at ten o'clock, in the chapel of the University of Pennsylvania, West Philadelphia, Dr. S. D. Gross in the chair.

Dr. John L. Atlee moved that the secretary or the publishing committee be requested to send to the governor of each State and Territory, and to each Province in Canada, a copy of the address of Dr. Bowditch. Adopted

Dr. I. Minis Hays reported that the names of over four hundred delegates had been registered.

The National Temperance Society here presented a request, which was quietly and unanimously tabled.

Dr. Seguin, of New York, addressed the congress, after which the following was adopted :—

"The International Medical Congress of 1876 recognizes the advantages which would accrue from the introduction of a gradual uniformity in the multiple and heterogenous elements of physic, as posology, nomenclatures, etc., and in the means and records of medical observation.

"In consequence, the congress appoints three delegates to the International Congress of 1877, to meet at Geneva, Switzerland, with the special duty of presenting a schedule of the means of uniformity in physic actually applicable in all countries, and another of those which could soon be made acceptable by the profession at large. Said delegates to be advised to invite the co-operation of the men who have already worked for the same cause at the International or National Medical or Pharmaceutical Congress of Paris, Vienna, St. Petersburg, Brussels, and Buffalo."

Reports from the different sections were then presented.

The Section on Mental Diseases reported on the question of Responsibility of the Insane for Criminal Acts as follows:— *Resolved*, "That there is at present manifested a tendency to hold the insane responsible for the commission of acts. That this tendency is unjust, unphilosophical, and contrary to the teaching of pathology, which clearly points out that insanity is the expression of disease."

The Section on Sanitary Science reported on the paper on Hospital Construction and Ventilation read by Professor Stephen Smith, of New York, as follows: "*Resolved*, That the report of Dr. Smith be recommended to the congress for publication. While the section does not pass judgment as to the conclusions of the report, the paper contains much of an interesting and historical character."

The Section on Otology, on the question, "What is the best mode of uniform measurement of hearing?" reported by Dr, Charles H. Burnett, concludes "that preference should be given to the voice over the watch and tuning-fork, and recommends a series of test words."

The question as to whether eczema and psoriasis are local or constitutional was decided by the Section on Dermatology in favor of constitutional character of these lesions.

The remaining sections did not report.

The address on Surgery was then read by Prof. Paul F. Eve, of the University of Nashville.

It is not easy to make an abstract of a paper which was almost encyclopædic in character.

Dr. J. M. Toner's paper was then read, his subject being Medical Biography.

In the Section on Surgery, Professor Van Buren's paper should have been read in the order of the programme, but Professor Lewis B. Sayre first read his paper on Coxalgia. Since Dr. Sayre had arranged to make a practical display of his method of treating this disease at the Philadelphia Hospital, he omitted much of the general detail of the subject. He drew the following conclusions:

(1.) That morbus coxarius is a disease peculiar to early childhood, or the age of reckless indifference.

(2.) That it is almost always of traumatic origin, and not necessarily connected with vitiated constitution.

(3.) That *rest* and freedom from pressure of *the parts* involved, while at the same time the rest of the body is allowed free exercise in the open air, and a nutritious diet is the best treatment that has yet been devised for this disease.

(4.) That if this plan of treatment is adopted in the early stages of this disease, the majority of the cases will recover with nearly, if not quite perfect motion, and without deformity.

(5.) That in the advanced *second* stage of the disease, when absorption cannot be produced, it is better to puncture or aspirate the joint and remove its contents than to leave it to rupture by ulceration.

(6.) That in the third stage of the disease, when the treatment recommended in this paper has been properly applied with satisfactory improvement, but progressive caries continues, then *exsection* of the diseased bones is not only justifiable but absolutely necessary.

(7.) That the operation of exsection of the hip is easily performed and attended with no danger.

(8.) That after exsection of the hip-joint in cases of caries the recovery is much more rapid and certain, and infinitely more perfect as to form, motion, and the usefulness of the joint and limb, than when left to the slow process of nature's exfoliation.

Dr. C. H. Mastin, the reporter on the Causes and Geographical distribution of Calculous Disease, was unable to be present.

His paper was read by Dr. H. Lennox Hodge. Dr. Mastin states that—

The *probable* causes at work in the formation of calculous affections are :—

(1.) Hereditary influences, which control a diathesis.

(2.) Digestive troubles, induced by an excess or deficiency of proper diet.

(3.) Sedentary life, with indulgence in stimulating food, by which healthy nutrition and assimilation are altered to mal-assimilation and mal-excretion.

(4.) Climatic changes, deficiency of clothing for the proper protection of the body, and an arrest of the healthy function of the dermoid tissue.

(5.) Want of harmony between the great secreting and excreting organs of the system,—the liver, skin and kidneys,—with catarrhal affections of the uro-poietic viscera favoring the formation of a colloid medium.

(6.) Injuries of the spinal cord, from which a proper nervous influence over the mucous membrane of the urinary organs is lost ; foreign bodies introduced into the bladder, producing cystitis, with its consequent muco-purulent discharge, from which the phosphates are precipitated.

In the section relating to hereditary influences he takes the ground that gout and calculus are nearly akin, one being the result of an excess of urate of soda in the system, the other dependent upon an undue proportion of uric acid ; he tries to prove that they are two different phenomena springing from one and the same root, and that consequently the causes which produce the one must influence the other.

Owing to the want of time he was unable to enter into an extended review of the geographical distribution of calculous affections, and hence confined his remarks on this point to calculus in America.

The paper on the Medical and Surgical Treatment of Aneurism, by Prof. William Van Buren, of New York, was a very valuable compilation. The subsequent discussion was shared by Professor Lister and Professor Joliffe Tufnell. The latter

illustrated his remarks by means of photographs and prepared specimens. Rest was the treatment he especially advocated. In regard to aneurism, Lister remarked that the question was not so much as to whether an aneurism were idiopathic or traumatic, but as to the amount of danger involved in surgical interference. If an aneurism were traumatic we at once cut down upon it and ligate the artery, knowing that no matter where we ligate the vessel will be healthy. On the contrary, in idiopathic aneurism we may have an artery which will not bear a ligature until we have dissected far up or down its continuity. In these cases it is almost as well to do the old operation at once.

Lister said he thought the old tourniquet much safer than is commonly supposed. He believes that when it produces ill effects it has not been rightly adjusted, or it has been left in the hands of unqualified assistants. Syme had only one death in forty cases, and this because he had used compression. Lister then described his treatment of nævi, by strangulation, the only modification being the use of carbolized catgut ligature.

Dr. John Ashhurst, of Philadelphia, then said that in regard to the abdominal compression, Prof. Pancoast had not claimed the credit which belonged to him. He was too busy a man to publish all he did. "But," said Dr. Ashhurst, "Professor Pancoast invented a compressor which antedated Lister's instrument about two years," although it was acknowledged that Professor Lister's compressor was more perfect. Dr. Ashhurst felt that as an American he ought to claim thus much credit for a native surgeon.

Prof. Joliffe Tuffnell then informed the section thatin 1835 LeStrange, of Dublin, left his collection of surgical instruments to two colleges in that city, and that among them was a compressor, invented by LeStrange, proving that there is almost literally nothing new under the sun. But it was felt by some that Tufnell was not quite fair in this allusion to LeStrange's instrument, for it was a simple abdominal compressor, used only in treatment of aneurism, whereas Pancoast's compressor was invented and used entirely for the purpose of checking and controlling hæmorrhage during operations at the hip-joint, so that a

comparison of two similar instruments which were invented for entirely different uses should not have been made.

It was then announced that Professor Estlander, of Finland, would read, on the following day, a paper on Osteo-Sarcoma, and another on Vesicle Disease in Finland.

In reply to a question concerning his statement that animal ligatures became reorganized, Lister said, "I do not claim that the ligature comes to life again, but that it disappears particle by particle, the place of each decaying particle being filled by a new one, just as in rebuilding a wall we might put a new brick in the place of an old one."—*Boston Medical and Surgical Journal, Sept. 14th.*

(*To be continued.*)

Hospital Reports.

MEDICAL AND SURGICAL CASES OCCURRING IN THE PRACTICE OF THE MONTREAL GENERAL HOSPITAL.

Aneurism of the Arch of the Aorta—Pressure on the Great Veins—Death and Autopsy. Under Dr. RODDICK. Reported by Mr. R. W. POWELL.

J. H. was admitted to the Montreal General Hospital on January 13th, 1876.

History.—Born in Ireland. For twenty-one years served as a soldier in the British army; left it eight years ago. Since he left the army, he worked five years in Ireland and the remaining three in Canada as an ordinary laborer. Never considered himself very hard worked in the army except during the Indian Mutiny, when he had to undergo some very hard work such as forced marches, &c., and on many occasions on short rations. While in the army he admits to have been a pretty hard drinker, but has not indulged to such an extent since, although he certainly has not been a total abstainer.

He has also a history of primary syphilis sixteen years ago; beyond that he has always enjoyed good health up to the time of his present attack, and from what can be learnt has a good family history.

About a year ago he suffered from a continued shooting pain in the right side, beginning a little above the right nipple and extending through to the scapula. This he attributed to a slight rheumatism, but did not get relief from it for several months. Does not remember ever having had an attack of dyspnœa, or huskiness of voice.

Three days ago he went out into the yard with nothing on but his trousers—nothing on his body or feet. Remained out only a few minutes, and then went to bed.

That night he felt very uneasy in bed, and, as he expresses it, "stuffed up." Next morning, feeling no better, and noticing his neck was slightly swollen, he presented himself at the out-door department of the Montreal General Hospital, where he received some medicine, and, at the same time, was told to return the next day if he did not improve. He returned on the following day, and was admitted.

Present Condition.—When examined, his nose and ears were slightly swollen, and his face appeared as if studded with specks of gunpowder. He felt himself a peculiar stuffy feeling about the neck and nostrils, but his general health was not much disturbed.

He is a large, heavily-built and well-developed man.

Jan. 14*th*, 1876.—To-day his face and neck are still more swollen and of a somewhat livid hue, eyes watery and ears cyanotic, extremities cold, and both hands and wrists are somewhat blue, their circulation being sluggish.

Pulse 84, full and soft; tongue slightly furred, and bowels regular.

Near the right sterno-clavicular articulation there is a distinct bulging or prominence extending down the chest for the space of a handsbreadth, coupled with redness of the cellular tissue covering it. Over this space, percussion elicits a dull note. On placing the stethoscope over this prominence there is heard a very intense systolic blowing murmur, diminishing in intensity towards the heart and down the sternum. This murmur may be traced distinctly along the lower margin of each clavicle to its acromial end, being most distinct on the right

side ; also heard behind, in the vertebral grooves, loudest above and on the right side, but can be traced down either groove for some distance. Heard also in either axilla, loudest in the right, and may also be traced up the carotid vessels on each side of the neck. Pulses on either side are symmetrical, as also are the pupils.

Was ordered milk diet and beef tea and 4 oz. of whiskey ; also quin. sulph. gr. ij., potass. chlor. gr. v. ; 4 q. h.

At the same time complete rest in bed, in the recumbent posture, is strictly enjoined.

Jan. 15*th.*—Passed a tolerably good night. Eyelids were swollen to-day. Bowels not having moved he was ordered a dose of ol. ric., and at the same time the following : potass. iod. gr. xv., tinct. digit. m. v. in water ; thrice daily.

Jan. 16*th.*—Very restless last night ; face more swollen and livid to-day, and a slight pulsation may be felt in the tumor.

Jan. 17*th.*—Redness and cyanosis increasing ; slightly delirious at night, and very restless. And the murmur, if anything is increasing in intensity.

Jan. 18*th.*—Pulse 84 ; full. Congestion in the face now becoming extreme, and breathing is louder. Redness on the chest is increasing, and extending down the right side.

This morning was seized with an attack of dyspnœa, which lasted two hours. Brandy was administered freely, and a large sinapism placed on the chest.

In placing the hand on the right side of the prominence on the chest a slight vibratory thrill can be detected, but the redness prevents it from being as distinct as it otherwise would be. Whiskey increased to 6oz. daily.

Jan. 19*th.*—Pulsation over the tumor is now very distinct. Complains of feeling cold ; very thirsty, and craves for stimulants ; pulse 84. Was given a draught of chloral hydrate last night. Urine high-colored, and contains a copious deposit of lithates.

Jan. 20*th.*—Pulse 84. No change in his appearance. Has passed, during the last 24 hours, only 15oz. of urine, thick and turbid from the presence of lithates : sp. gr. 1.036 : contains

neither albumen nor sugar. Was ordered: spts. ammon. arom., ℥iv.; tinct. valer. ammon., ℥iss.; ext. seneg. fl., ℥i.; syr. simplic., ℥i.; aquæ ad ℥vi. Tablespoonful three times a day. The pot. iod. to be continued.

Jan. 22nd.—Yesterday passed 15oz. of urine, and to-day 25oz. Still high-colored; eyes almost completely closed now, so great is the œdema; lips very thick; very restless; speaks thickly and indistinctly.

Jan. 25th.—Has continued much the same to-day; pulse is weak and irregular; brandy ordered to replace the whiskey.

Jan. 26th.—No further change.

Jan. 29th.—Still much the same. Has a slight cough, and some bronchial rales can be heard at the root of the lungs.

Feb. 1st.—Breathing becoming more obstructed, evidently from œdema glottidis. He was more restless than ever during the night, and had to be forcibly retained in bed early this morning by some assistants.

Feb. 10th.—This condition of things continued until to-day, when it was noticed that the œdema was not so great in the head and face, the eyes being opened more easily and speech becoming clearer, and at the same time the arms are becoming œdematous.

Feb. 14th.—Œdema in the arms increasing. Bowels not having been opened for three days, he was ordered elaterium ⅓ gr., potass. bitart. ℥ss.; two powders to be given, and the effect watched. These did not produce the desired effect.

Feb. 15th.—Cyanosis returning in the face; and the œdema is as extensive as it was before, although it still continues in the arms. He is now incoherent. This condition continued till 7:15 p.m., when he gradually sank and died without any further symptoms.

Autopsy—43 *Hours after death.*—On opening the chest, the first thing that attracted attention was a huge clot of blood, which completely filled the right pleural cavity. This was removed, and found to weigh fifty-two ounces.

The lungs were then removed from their cavities, and the parts cut completely through to the vertebral column. The

whole mass was then dissected up from below, stripping the aorta with it, till the arch of the aorta was reached. A deep cut was then made across the neck, getting behind the vessels, and the dissection carried downwards to the arch. The whole mass was then removed.

There was œdema of the glottis. The vessels of the dura mater did not seem very much over-distended, but time had probably been sufficient to allow them to empty themselves before the autopsy.

On carefully dissecting the mass of tissues removed from the chest, a large aneurismal sac was found to implicate the ascending arch of the aorta throughout its whole extent from the sinus Valsalvæ to the origin of the innominate artery,—which latter branch was in no way implicated. The sac was large enough to contain, I should say, a good-sized orange in its interior.

Its surface, especially anteriorly, seemed covered with a layer of inflammatory products, and the tissues were glued together. After carefully separating the pericardium from its attachment above and clearing away the débris, a wide opening was found communicating with the sac. This opening was situated about half an inch above the pericardial attachment and on the right of the sac, and was evidently the place where the sac ruptured into the right pleura.

The venous trunks seemed in their normal situation. The left vena innominata ran obliquely from left to right, and from above downwards across the back of the sac, and above the centre of the sac the right innominate joined it, and the venacava passed from thence to the right auricle.

Mitral valves were normal. The aortic valves, although a little thick, seemed quite competent.

An Iron Renal Calculus.—M. Laborde presented to the Société de Biologie a renal calculus, which chemical examination showed to contain 75 per cent. of peroxide of iron. Extraordinary as the fact may seem, of its authenticity there can be no doubt, for the calculus was passed by a *confrère* while taking a bath on account of intense nephritic colic. He was able to trace the migration of the calculus, which during an abundant hæmaturia he received in his hand.—*Medical Times & Gazette.*

Reviews and Notices of Books.

Cyclopædia of the Practice of Medicine.—Edited by Dr. H. von Ziemssen, Professor of Clinical Medicine in Munich, Bavaria. Vol. 2: Acute Infectious Diseases, 8 vo. pp. 751. Vol. 3, Chronic Infectious Diseases, 8 vo. pp. 672. Vol. 4 Diseases of the Respiratory Organs, 8 vo. pp. 806. Vol. 5, Diseases of the Respiratory Organs, 8 vo. pp. 712. By various authors.—Edited by William H. Buck, M.D. New York: William Wood & Co., 27 Great Jones street, 1875 and 1876.

We owe Messrs. Wm. Wood and Company, the publishers of this great work an apology for having neglected to notice these volumes as they issued from the press. In former numbers of our periodical we noticed volumes one and ten as they were received, we have yet to fulfil the tasks allotted to other hands, of recording an opinion of the other volumes, and although, perhaps, late in the day, yet it is not too late to draw attention to the continued success of the enterprize.

Vol II includes the second part of the infectious diseases. In this volume we have from the pen of Professor Thomas of Leipzig a full account of varicella, measles, rubeola or roseola which are taken by our authors as indicating the same disease, and scarlet fever. Some considerable difference of opinion and confusion exists in the use of the term rubeola; by the older authors and some moderns, it is used to signify the disease measles, which has a regular period of incubation, though, according to Sir Thomas Watson, the expression is applied by some authors to signify what he terms "the occasional though rare combination of measles and scarlet fever; a hybrid of the two." Certainly, so far as we have ourselves observed, roseola, or rubeola of our author, is a distinct disease. Scarlatina is considered at full length, though we cannot but call attention to the term employed which according to Mason Good, "though used by most modern writers is a barbarous and unclassical term.

Dr. Curschmann gives us an excellent chapter on small-pox. that gentleman having enjoyed unusual advantages in observ-

ing that disease, as City Physician to the Small-pox Hospital of Mayence during the epidemic in 1870 and 1871, when it was very prominent in that city.

The next paper we have is by Dr. Zuelzer, who takes up the subject of erysipelas, miliary fever, dengue, influenza, and hay fever. Speaking of this latter the author notes the fact that all temperaments are liable to its attacks, but more especially the nervous, and that, to a certain extent, hereditary predisposition has been observed. With regard to period of the year, May, June and July are the months during which it is most prevalent, also sometimes in the spring and autumn. After a dissertation by Hertz upon malarial diseases, this volume closes with a paper on epidemic cerebro-spinal meningitis, by von Ziemssen; in this latter paper are given several temperature charts in illustration of cases reported.

Vol. III is devoted to chronic infectious diseases. In this are discussed syphilis, infection by animal poisons, as glanders, anthrax, hydrophobia, the foot and mouth disease, or aphthæ-epizooticæ, the infection by the bite or sting of poisonous animals, and lastly the diseases arising from migratory parasites. These papers, all of importance and deep interest, are from the pens of Professor Christian Bäumler, Professor Otto Bollinger, and Professor Arnold Heller. In this latter paper Prof. Heller omits all notice of the Dracunculus or Guinea worm, besides a number of other parasites, but as he himself states according to his classification only a small number of parasites come up for consideration under the heading of those that penetrate into the tissues, thus, under this caption he considers alone of the cestoda, the echinococcus, and the cysticercus, and of the nematoda, the trichinæ.

Volumes IV and V are devoted to the diseases of the respiratory organs. In Vol. IV we have papers from Drs. Fraenkel, von Ziemssen, Steiner, Riegel, and Fraentzel. Diseases of the nose, larynx and pharynx, are discussed by Dr. Fraenkel. Von Ziemssen takes up the consideration of anæmia, hyperæmia, hæmorrhage and catarrhal inflammation of the laryngeal mucous membrane. Croup is the next disease considered, with croupous laryngitis, and diphtheritic croup, which are from the pen of Dr.

Steiner. Riegel gives a paper on diseases of the trachea and bronchi, including croupous or fibrinous bronchitis, bronchitis with the formation of fibrinous casts, foreign bodies in the trachea and bronchi, and bronchial asthma, &c., and Fraentzel describes pleurisy with its various terminations, hydrothorax, hæmathorax, pneumothorax, tuberculosis of the pleura, and malignant growths in the pleura.

In Vol. V. will be found papers on croupous pneumonia, catarrhal pneumonia, and embolic pneumonia, by Professor Juergensen. Professor Hertz takes up the subject of anæmia, hyperæmia and œdema, hæmorrhage of the lungs, atelectasis, atrophy, hypertrophy, pulmonary emphysema, gangrene of the lungs, new growths in the lungs and in the mediastinum and animal and vegetable parasites in the lungs.

Professor Ruehle gives two papers; one on pulmonary consumption, the other on acute miliary tubercle. These are supplemented by a pathological description of chronic and acute tuberculosis, by Professor Rindfleisch.

Vol. XI, which we have just received, is a first instalment on diseases of the nervous system. This we will consider at greater length in a future issue. Perhaps it is as well that we have not noticed these volumes as they appeared, inasmuch as the present notice will give our readers a view of the general scheme of the work. It has apparently been the aim of the editor von Ziemssen, to select men amongst his countrymen to write the articles on subjects upon which they have, to a certain extent, become authorities. Each paper is a monograph in its way, and is a fair exponent of the literature of the subject under discussion. The profession owe a debt of gratitude to the gentlemen who have undertaken the translation of these volumes, and we trust that they will meet with liberal support, as few physicians can afford to be without these volumes, more especially if they desire to become familiar with the advances that have been made in medicine during the past few years.

The paper and print is all that can be desired. The translation is very clear, and typographical errors few. The publishers have apparently spared no expense in rendering the work superexcellent in every respect.

Extracts from British and Foreign Journals.

Unless otherwise stated the translations are made specially for this Journal.

Differential Diagnosis.—Hitherto we have been taught that it is possible by means of physical examination, to diagnose the presence of fluid in the pleural cavities, but that no auscultatory differences resulted from different kinds of fluid; in other words that dropsical, sero-fibrinous, and purulent fluids were all alike in the transmission of sounds to the ear of the listener.

Baccelli's work goes to prove the very opposite; namely, that the variety in the auscultatory phenomena will enable us to form an opinion as to the nature and constitution of the fluid in the pleural cavity. In order to form such a precise diagnosis, all disturbing sounds must be as far as possible excluded. The person whose chest is being auscultated should turn his face whilst speaking in a direction which is, as nearly as possible, opposite to a diagonal drawn through the very middle of the effused fluid. The ear which auscultates should be pressed close against the chest which is examined, and the free ear should be closed with the index finger of the corresponding hand. By auscultating in this method, Baccelli has found that the thinner and more homogeneous the fluid in the pleural cavity is, so much the more easily, perfectly, and to greater distances will it transmit the vibrations of the voice, and even whispers. The principal conduction of sound is at the lower part (bases) of the collected fluid; whispered words are, however most clearly accentuated, along with bronchial expiration, when the fluid is nearly homogeneous (serous effusions). The upper part of the effusion conducts sound worst, for there neither bronchial breathing nor loud talking can always be heard. In proportion to the thickness of the fluid, the conduction of sound is hindered. Hence effusions with fibrinous flakes, or with blood and pus-corpuscles, conduct sounds badly. A true empyema is the worst conductor of sound of all the effusions. Fluids with granular corpuscles, fat, and fat-crystals, and other not morphological or

fibrinous elements, behave, as regards auscultation, very much like hydropic effusions. The physical explanation appears to be as follows. Unlike gases, fluids conduct tones with intensity proportioned to their lightness and homogeneousness; whilst the waves of sound are conducted somewhat more quickly, but with diminished intensity, through thicker and heterogeneous fluids, which are mingled with elastic, solid bodies. In the case of mixed coagula and corpuscular elements, as well as in the case of exudations enclosed in thick, villous membranes, there is, in consequence of this mixture and variety of conducting media, more and more reflection [? refraction] of the sound-waves, instead of their being conducted in almost straight lines, as in the case of homogeneous endopleural fluids, which are strong conductors. At the point where the lung is most compressed, towards the base of the exudation, the sound-waves are probably reflected but little, and thus little decomposed. In other words, they are not much affected by interference at this spot. It is, perhaps, on similar acoustic principles, that a pericardium, so distended with fluid as to be absolutely dull on percussion, often conducts bronchial râles from adjacent portions of lung with remarkable clearness [Skoda's consonance, or phenomena o resonance of Baccelli.]

The importance of deciding on the nature of the contents is obvious, in relation to paracentesis thoracis.*—*Berlin Klin. Wochenschrift.—Med. Record.*

Hospital Gangrene.—(*The Medical and Surgical Reporter*, April 15, 1876.)

In a paper in the Archiv für Klin. Chirurg., by Prof. Von Nussbaum, some details of much practical importance are given with regard to the prevention and curative treatment of this affection. In 1872, the first year of its appearance in the hospital, the gangrenous condition of the wounds in those attacked was always readily and successfully controlled by the local application of lotions containing nitrate of silver, corrosive sublimate, or carbolic acid; but as the distinctive changes became more

* Baccelli and Valentiner.

and more acute, it was found necessary to have recourse to more active means, and to apply caustic paste and the actual cautery. Energetic applications of the latter agent proved the most efficacious, and a perfectly successful result of such treatment was usually indicated by a previous fall of the patient's temperature. During the prevalence of the gangrene many different attempts were made to protect healthy wounds and sores from contagion. The continuous water bath, applications of ice, moist warmth, lotions of carbolic acid, salicylic acid, chlorine water, etc., were tried without good results. Finally Lister's antiseptic plan of dressing was practiced most strictly, so that no open surface was dressed save under the carbolic acid spray, and no instruments or dressings used save after careful disinfection. Hospital gangrene at once ceased, and not a single case has been observed in Prof. Nussbaum's ward since the adoption of this plan of dressing, although at the period of its first use eighty per cent. of the surgical patients had been affected. He holds that the secret of Lister's method lay in the pedantic exactness in its mode of application.—*Chicago Medical Journal and Examiner.*

Formula for Migriane.—M. Fort recommends the following:—Sulph. quin. gr. xv., pulv. bellad. gr. iv., ext. digital. gr. vijss., ext. valerian gr. xv., mel. q. s., ut f. pil. xx. Whatever may be the length of the interval which separates the paroxysms—whether a week, or month, or more—the patient should take the twenty pills, commencing four days before the expected recurrence of the paroxysm, when he will take one in the morning fasting, and one at bed-time; next day he takes three—two in the morning, and one at night: the day after that he takes six—three in the morning, and three at night; on the day before the paroxysm is expected he will take nine—four in the morning and five in the evening. If the expected paroxysm be not in this way prevented, it will, at all events, be mitigated, and the patient will recommence his course of pills four days before its expected successor.—*Med. Times and Gazette.*

CANADA

Medical and Surgical Journal.

MONTREAL, OCTOBER, 1876.

SEMI-ANNUAL MEETING OF THE COLLEGE OF PHYSICIANS AND SURGEONS, C.E.

The semi-annual meeting of the College of Physicians and Surgeons was held at the University of Laval in the city of Quebec, on Wednesday the 27th September, ult., when besides the usual routine business of the College, matters of very great importance to the Profession in this section of the dominion were taken up and discussed, and a definite policy adopted in respect to seeking Legislative amendment to our present act of incorporation. The bill as submitted by the committee appointed at the meeting in May last, for the purpose of drawing it up, was with some few alterations unanimously adopted by the meeting, and was ordered to be submitted to council and properly prepared so as to lay it before the Local Legislature of this Province, at its next session, with a view of its becoming law. There are some features in this bill to which we will draw attention. All persons entering on the study of medicine in this Province will be required to pass an examination on subjects of preliminary education, and obtain a certificate of qualification from the Provincial Medical Board. No change from the present system so far as the subjects examined on is contemplated, but the examiners are to be selected from amongst those actually engaged in the work of general education, and the subjects to be examined on are very much the same as those demanded by the General Council of Medical Education and Registration of Great Britain.

Again, all applicants for licence will be required to hold a

diploma, or certificate of qualification, from some University or incorporated school of Medicine, approved of by the Board. This will be evidence of a comptete course of study, after which the candidate shall be required to pass an examination as to his knowledge and skill, for the efficient practice of Medicine, Surgery, and Midwifery, which shall entitle the candidate to registration, under this Act, and he shall receive a license *ad practicandum*. The Provincial Medical Board shall appoint examiners, nine in number, by whom all candidates for licence to practice shall be examined. No governor of the College shall be an examiner, if he accepts that office for the time being he shall cease to be a governor. Of the examiners one shall be chosen from each of the four medical schools now existing in this Province, and the remaining five shall be chosen from amongst the registered Medical Practitioners, not connected with any of the teaching bodies. These are a few of the prominent features of the bill, but we shall endeavour in our next to give the bill in full, after it has passed in review before the Council, and put into shape to be laid before the House.

At the meeting in Quebec, there was one motion, which, however, was not sustained, about which we have to make a few remarks : It was moved that all present Licentiates of the College shall be admitted members without the payment of the customary fee. This would be eminently an injury to those members already in good standing, and would be seriously deteimental to the best interests of the profession. It is a question of great importance as a profession, we look for its advancement, and that advancement can alone be secured by united action. To lay the matter fairly before our readers, we must explain that the profession already holds corporate rights, and that this bill is one of amendment, and not an act incorporating the profession anew. The corporation of the Co llege of Physicians and Surgeons has already an existence, and is doing the work assigned to it by the Legislature of the country. It holds property in cash amounting to somethin less than $3000. This property belongs legitimately to the members of the College. The right of becoming a member of the College is open to all

Licentiates of four years's standing on the payment of the sum of $10, with a subscription of two dollars per annum. All members in good standing are eligible for election as governors, and every third year thirty-six governors are elected to conduct the business of the College. To admit all the present Licentiates of the College without fee would be a serious blunder, and would preclude all hope of future advancement, of a permanent character.

We have been asked on several occasions what good is to be derived by complying with the present existing law and contributing to the funds of the College, we are asked to point out what has been done of a substantial nature, where is there a College building, and where a Library of reference. Has it never struck the gentlemen holding these views that so long as they hold aloof so long will the College exist as at present, receiving each year in fees what barely defrays the expense of management? If, as a profes s, we desire to possess a location, and a library of reference, these good things cannot be obtained without means. But yet another suggestion was offered, but which was on a division lost by a large majority of those present voting against it. It was moved that all licentiates, on receiving their license, should be at once admitted as members without the probationary period of four years, as under the existing act; and it was argued that young men entering the profession would be more likely to take an interest in the college, and effectively work it, if they were at once admitted to all the privileges offered without waiting for a period of four years to obtain those privileges. To this we can alone say that in all other similarly constituted bodies a period of probation exists, which is looked upon as a most conservative measure. It works to advantage in other countries, and we should suppose it will be equally so in our own. Space will not permit our saying more on this subject at present, but we trust that if legislation we are to have, we will receive at the hands of our Local Parliament what we demand and not what they, as our law-givers, may regard as best for us.

REPORT OF THE SEMI-ANNUAL MEETING OF THE COLLEGE OF PHYSICIANS AND SURGEONS.

The semi-annual meeting of the Board of Governors of the College of Physicians and Surgeons of Lower Canada took place at Laval University, city of Quebec, on Wednesday the 27th September, 1876, when the following governors were present: R. H. Russell, M.D., President; Drs. Joseph Marmette and R. P. Howard; Vice-Presidents: Drs. H. Peltier, and A. G. Belleau, Secretaries; Dr. G. E. Fenwick, Registrar. Drs. A. Jackson, R. F. Reinfret, A. T. Michaud, E. A. de St. George, L. Tetu, P. Pelletier, C. Gingras, L. J. E. Desjardins, W. E. Scott, W. H. Hingston, J. P. Rottot, Hon. L. R. Church, J. B. Gibson, J. A. Duchesneau, F. X. Perrault, E. Landry, R. M. G. Mignault, E. D. Worthington, F. D. Gilbert, and F. J. Austin.

The Hon. Dr. T. Robitaille, a member of the College, was also present, and took part in the proceedings.

The minutes of the last meeting were read and approved. The report of the Auditors of the Treasurer's books, was also submitted and approved. The bill of Amendment to the existing Medical Act was submitted and received some modifications, after which it was moved, seconded, and carried unanimously, and was ordered to be submitted to Council so as to receive the necessary alterations prior to its being laid before to the Local Parliament of the Province of Quebec at its next session. Dr. Paré, of Sherbrooke, a Licentiate of over four years, who had been proposed and seconded at a former meeting, was duly elected a member of this College. The following Gentlemen, Graduates in Course of the several Universities named below having been duly sworn by the President, received their license to practice Medicine, Surgery, and Midwifery, and their names were entered in the Register, viz:

From Laval Uuniversity, Messieurs D. M. Brochu, P. E. Lemieux, G. Lechance, A. D. Lepage, M. A. A. Falardeau, T. Laliberté, F. A. Dion, P. G. Jennings, E. Beaudry, A. Pauquin,

C. A. Dubé, G. P. Tanguay, A. Lemire, A. L. Smith, and J. C. Maranda.

McGill University: Doctors. A. W. Marston, T. A. Greer, S. K. Falls, and A. L. Gilbert.

Victoria College: Drs. Francis E. Roy, and Herbert E. Shepherd.

Bishop's College, Lennoxville: Dr. T. G. Sheridon.

The following gentlemen having passed their examination in the preliminary branches were granted certificates to entitle them to enter on the study of the Profession of Medicine, viz: Messrs. A. Paradis, J. F. Landry, B.A., W. A. Verge, B.A., G. T. Morreau, A de LaCherotiere, B.A., C. Mayrand, E. Fourniere, J. A. Rochette, L. A. Genereux, P. Dubé, F. Campeau, E. Belcourt, E. O. Cloutier, A. Soulaid. This brought the business to a close, and the College adjourned.

BELMONT RETREAT.

We are pleased to learn that our friend Dr. Wakeham has resigned his practice at Gaspe in order to take the medical charge of this institution. This private establishment for the reception of insane patients has now become a deservedly appreciated retreat for the care and management of these only too numerous cases. From the gradual increase in the number of its inmates the desirability of having a resident physician has been for some time felt. Dr. Wakeham has had very extensive experience in the management of the insane in connection with the Beauport Asylum and we feel confident that the fact of his now devoting himself entirely to the interests of the Belmont Retreat will do much to raise it in the estimation of the profession of this province and elsewhere.

PNEUMATIC ASPIRATION,

AFTER THE MANNER OF DIEULAFOY.

"It is always possible, owing to Aspiration, to search for a fluid collection without any danger, whatever may be its seat or its nature."

"I have thrust these needles into almost every part of the body, into the Joints, the Liver, the Spleen, the Bladder, the Intestines, the Lungs and the Meninges, and I can affirm, and a great number of observers affirm with me, that we have never seen consecutive accidents."—*Dieulafoy on Pneumatic Aspiration*, pp. 21,24

WE invite the attention of the Medical Profession to this New Apparatus for Aspiration, constructed upon the general plan of Potain's modification of Dieulafoy's Aspirator, but containing the following improvements and inventions of our own :—

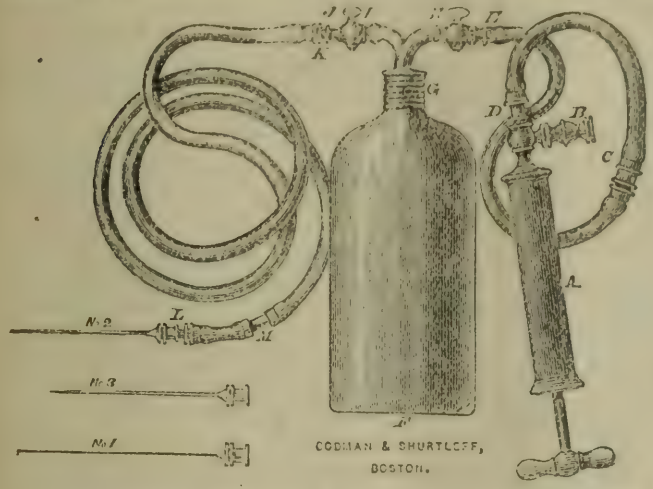

FIG. 68.

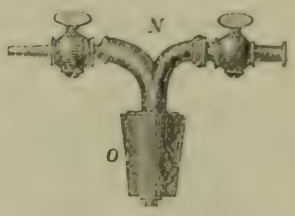

FIG. 69. The Stopper and Cocks supplied with Apparatus No. 2.

1st.—Means of changing the pump from an exhaust to a force-pump, and *vice versa*, thereby enabling the operator not only to withdraw an abnormal fluid, but to inject the cavity through the tubes and needle of the apparatus with one adapted to induce healthy action.—*See Dieulafoy on Aspiration*, pp. 276, 278.

2nd.—The employment in our apparatus No. 1, of a metal Screw Cap, fitting the neck of the receiver supplied with this aparatus so securely that it cannnot be forced from its place by condensed air while injecting, or accidentally removed while the receiver is in a state of vacuum for aspiration.

3d.—The substitution, for the ordinary oiled silk valves of other apparatus, of a kind indestructable both in form and material.

4th.—A simple and comparatively inexpensive attachment for evacuating the contents of the stomach, equal, if not superior, to any in use hitherto.

Commendations bestowed upon our Aspirators, by physicians familiar with the latest European and American ones, lead us to believe that, in some important particulars at least, they are superior to any.

In his work on Pneumatic Aspirations, Dieulafoy shows the harmlessness of the Aspiratory Puncture and the great superiority to the Exploring Trocar as a means of accurate diagnosis in all collections of Pathological Fluids. It has been used with unprecedented success in Retention of Urine, Reduction of Strangulated Hernia, in Ascites, Hydrothorax, Empyema, Pneumothorax, Effusions into the Pericardium, Serous, Purulent and Hematic Effusions of the Knee, Hydrocele Hydatid Cysts, Abscesses of the Liver, and in various other Pathological Leisons

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No. 1. Air Pump—exhaust or condensing as described; 16 oz. receiver, of strong glass, with screw cap; three steel, gold-plated Aspiratory Needles, together with the necessary tubes, stop-cocks, &c., as shown in Fig. 68, fitted in a neat case, accompanied with printed directions..... 18.00

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COLLEGE OF PHYSICIANS & SURGEONS

MEDICAL DEPARTMENT OF COLUMBIA COLLEGE.

Corner 23rd St. and 4th Ave., New York City.

SEVENTIETH SESSION, 1876-77.

FACULTY OF MEDICINE.

ALONZO CLARK, M.D.,
President, and Professor of Pathology and Practical Medicine.

WILLARD PARKER, M.D.,
Professor of Clinical Surgery.

JOHN C. DALTON, M.D.,
Professor of Physiology and Hygiene.

SAMUEL ST. JOHN, M.D.,
Professor of Chemistry and Medical Jurisprudence.

THOMAS M. MARKOE, M.D.,
Professor of Surgery.

T. GAILLARD THOMAS, M.D.,
Professor of Obstetrics and the Diseases of Women and Children.

JOHN T. METCALFE, M.D.,
Emeritus Professor of Clinical Medicine.

HENRY B. SANDS, M.D.,
Professor of Anatomy.

JAMES W. McLANE, M.D.,
Adjunct Professor of Obstetrics and the Diseases of Women and Children.

THOMAS T. SABINE, M.D.,
Adjunct Professor of Anatomy.

CHARLES F. CHANDLER, Ph. D.,
Adjunct Professor of Chemistry and Medical Jurisprudence.

EDWARD CURTIS, M.D.,
Professor of Materia Medica and Therapeutics and Secretary of the Faculty.

FRANCIS DELAFIELD, M.D.,
Adjunct Professor of Pathology and Practical Medicine.

JOHN C. CURTIS, M.D.,
Adjunct Professor of Physiology and Hygiene.

WILLIAM DEHMOLD, M.D.,
Emeritus Professor of Clinical and Military Surgery.

WILLIAM H. DRAPER, M.D.,
Clinical Professor of Diseases of the Skin.

CORNELIUS R. AGNEW, M.D.,
Clinical Professor of Diseases of the Eye and Ear.

ABRAHAM JACOBI, M.D.,
Clinical Professor of Diseases of Children.

FESSENDEN N. OTIS, M.D.,
Clinical Professor of Venereal Diseases.

EDWARD C. SEGUIN, M.D.,
Clinical Professor of Diseases of the Mind and Nervous System.

GEORGE M. LEFFERTS, M.D.,
Clinical Professor of Laryngoscopy and Diseases of the Throat.

CHARLES McBURNEY, M.D.,
Demonstrator of Anatomy.

CHARLES KELSEY, M.D.,
Assistant Demonstrator of Anatomy.

FACULTY OF THE SPRING SESSION.

JAMES L. LITTLE, M.D.,
Lecturer on Operative Surgery and Surgical Dressings.

GEORGE G. WHEELOCK, M.D.,
Lecturer on Physical Diagnosis.

A. BRAYTON BALL, M.D.,
Lecturer on Diseases of the Kidneys.

ROBERT F. WEIR, M.D.,
Lecturer on Diseases of the Genito-Urinary Organs.

MATTHEW D. MANN, M.D.,
Lecturer on the Microscope as an Aid to Diagnosis.

H. KNAPP, M.D.,
Lecturer on Diseases of the Eye and Ear.

The Collegiate Year embraces a Special Spring and a Regular Winter Session, attendance at the latter only being required for the graduating course. The Spring Session begins near the middle of March, and continues till June 1. The Regular Winter Session for 1876-77 begins Monday, October 2, and continues till March, when the College Commencement is held.

Tuition is by the following methods: I. Didactic Lectures with Demonstrations. During the Winter Session, from five to six lectures are given daily by the Faculty on the seven general branches of Medical Science. Attendance obligatory. Fees, $20 for the course on each branch, or $140 for the entire curriculum. During the Spring Session two lectures are given daily by the Faculty of the Spring Session. Fees, each branch, $5, or $25 for the whole. II. Clinical Teaching. This important subject receives the fullest attention. Ten Clinics, covering all departments of Medicine and Surgery, are held weekly, throughout the entire year in the College Building. In addition, the Faculty, being strongly represented on the staffs of the larger City Hospitals and Dispensaries, such as the Bellevue, Charity, and Roosevelt Hospitals, the New York Eye and Ear Infirmary, &c., give daily systematic clinical lectures in one or more of these Institutions, as a regular feature of the College curriculum. Attendance at clinics is optional, and without extra charge. III. Recitations are held daily, throughout both Sessions, by a corps of Examiners. Attendance optional. Fees, Winter Session, $40. Spring Session, $20. Collegiate Year, $60. IV. Personal Instruction.—*Practical Anatomy* is taught from October to May, and every student is expected to dissect. Fee $25, good for a Collegiate year. Cases of Obstetrics are furnished to advanced students, without charge. Practical Chemistry is taught in the Spring. Fee, $15. Personal Instruction in *Operative Surgery, Minor Surgery, Physical Diagnosis, Ophthalmoscopy, Otoscopy* and *Laryngoscopy* is also given by Special Instructors, for moderate fees. Attendance optional.

Expenses.—The necessary Collegiate Expenses are the yearly Matriculation Fee ($5), good for a Collegiate year, and the fees for the Lectures of the winter session, ($20 for the course on each Branch, or $140 for the entire curriculum.) A *Graduation Fee* of $30 is also charged. The Graduating course requires three years' study, and attendance upon two courses of Lectures on each of the seven branches of the winter curriculum. Remissions and reductions of lecture fees are made to graduates, theological students, and students who have already attended two full courses.

All Fees are Payable in Advance. Board can be had for from $4 to $7 a week, and the Clerk of the College will aid students in obtaining the same.

For the Annual Catalogue and Announcement, or for further information, address

EDWARD CURTIS, M.D.,

Secretary of the Faculty, College of Physicians and Surgeons,
Corner Twenty-third Street and Fourth Avenue, New York

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Dispensing Chemist.

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SUPPLIED TO PHYSICIANS.

Ivory Points or Quill slips, each	25 cts.
Package, containing ten,	$2.00
Capillary Tubes,	75 cts. to 2.00 each
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150 WILLIAM STREET, NEW YORK.

BELLEVUE HOSPITAL MEDICAL COLLEGE.

CITY OF NEW YORK.

SESSIONS OF 1876-'77.

THE COLLEGIATE YEAR in this institution embraces a preliminary Autumnal Term, the Regular Winter Session, and a Spring Session.

THE PRELIMINARY AUTUMNAL TERM for 1876-1877 will commence on Wednesday, September 13, 1876, and continue until the opening of the Regular Session. During this term, instruction, consisting of didactic lectures on special subjects and daily clinical lectures, will be given, as heretofore, by the entire Faculty. Students expecting to attend the Regular Session are strongly recommended to attend the Preliminary Term, but attendance during the latter is not required. *During the Preliminary Term, clinical and didactic lectures will be given in precisely the same number and order as in the Regular Session.*

THE REGULAR SESSION will commence on Wednesday, September 27, 1876, and end about the 1st of March, 1877.

Faculty.

ISSAC E. TAYLOR, M. D.,
Emeritus Professor of Obstetrics and Diseases of Women and Children, and President of the Faculty.

JAMES R. WOOD. M. D., LL.D.,
Emeritus Prof. of Surgery.

FORDYCE BARKER, M. D.
Professor of Clinical Midwifery and Diseases of Women.

AUSTIN FLINT, M. D.,
Professor of the Principles and Practice of Medicine and Clinical Medicine.

W. H. VAN BUREN, M. D.,
Professor of Principles and Practice of Surgery and Clinical Surgery.

LEWIS A. SAYRE, M. D.,
Professor of Orthopedic Surgery, Fractures and Dislocations, and Diseases of Genito-Urinary System.

ALEXANDER B. MOTT, M. D.,
Professor of Clinical and Operative Surgery.

WILLIAM T. LUSK, M.D.,
Professor of Obstetrics & Diseases of Women and Children and Clinical Midwifery.

EDMUND R. PEASLEE, M.D., LL., D.
Professor of Gynæcology.

WILLIAM M. POLK, M.D.,
Professor of Materia Medica and and Therapeutics and Clinical Medicine.

AUSTIN FLINT, Jr., M.D.
Professor of Physiology and Physiological Anatomy, and Secretary of the Faculty.

ALPHEUS B. CROSBY, M.D.,
Professor of General Descriptive & Surgical Anatomy.

R. OGDEN DOREMUS, M. D., LL.D.
Professor of Chemistry and Toxicology.

EDWARD G. JANEWAY, M. D.,
Professor of Pathological Anatomy and Histology, Diseases of the Nervous System, and Clinical Medicine.

PROFESSORS OF SPECIAL DEPARTMENTS, Etc.

HENRY D. NOYES, M.D.,
Professor of Opthalmology and Otology.

JOHN P. GRAY, M.D.,
Professor of Psychological Medicine and Medical Jurisprudence

EDWARD L. KEYES, M.D.,
Professor of Dermatology, and adjunct to the Chair of Principles of Surgery,

EDWARD G. JANEWAY, M.D.,
Professor of Practical Anatomy
[Demonstrator of Anatomy.]

LEROY MILTON YALE, M.D.,
Lecturer Adjunct upon Orthopedic Surgery.

A. A. SMITH, M.D.,
Lecturer Adjunct upon Clinical Medicine.

A distinctive feature of the method of instruction in this College is the union of Clinical and didactic teaching. All the lectures are given within the hospital grounds. During the Regular Winter Session, in addition to four didactic lectures on every week day except Saturday, two or three hours are daily allotted to clinical instruction.

The Spring Session will consist chiefly of recitations from Text-books. This term continues from the middle of March to the end of June. During this session there will be daily recitations in all the departments, held by a corps of examiners appointed by the regular Faculty. Regular clinics are also given in the Hospital and College building.

FEES FOR THE REGULAR SESSION.

Fees for tickets to all the Lectures during the Preliminary and Regular Term including Clinical Lectures	$140 00
Matriculation Fee	5 00
Demonstrator's Ticket including material for Dissection	10 00
Graduation Fee	30 00

FEES FOR THE SPRING SESSION

Matriculation (Ticket good for the following Winter	$ 5 00
Recitations, Clinics and Lectures	35 00
Dissection, (Ticket valid for the following Winter)	10 00

Students who have attended two full Winter courses of lectures may be examined at the end of their second course upon Materia Medica, Physiology, Anatomy, and Chemistry, and, if successful, they will be examined at the end of their third course upon Practice of Medicine, Surgery, and Obstetrics only.

For the Annual Circular and Catalogue, giving regulations for graduation, and other information, address the Secretary of the College, Prof. Austin Flint, Jr, Bellevue Hospital Medical College.

TO THE MEDICAL PROFESSION.

A NEW AND IMPORTANT REMEDY.

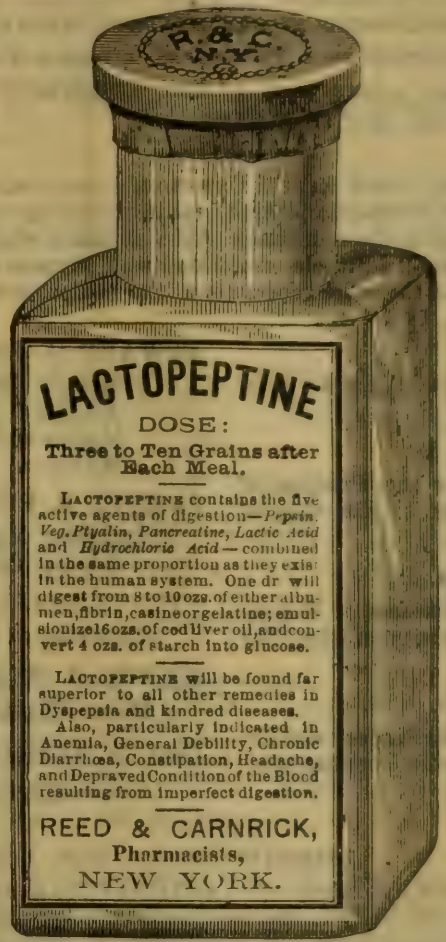
LACTOPEPTINE.

LACTOPEPTINE contains all the agents of digestion that act upon food, from mastication to its conversion into chyle, and is therefore the most important remedy for Dyspepsia that has ever been produced.

The digestive power of LACTOPEPTINE *is seven times greater than any preparation of Pepsin in the market, as it has the important advantage of dissolving all aliment used by mankind, while Pepsin acts only upon plastic food.*

This preparation has now been in the hands of the Medical Profession for two years, during which time its therapeutic value has been most thoroughly established in cases of **Dyspepsia, Intestinal diseases of Children, Chronic Diarrhœa, Constipation, Vomiting in Pregnancy or Dyspepsia, Headache, and all diseases arising from imperfect nutrition.**

One of the most important applications of **LACTOPEPTINE** *is in those cases where the digestive organs are unable, from debility, to properly prepare for assimilation the remedies indicated. In such cases combine it with the remedy indicated.*

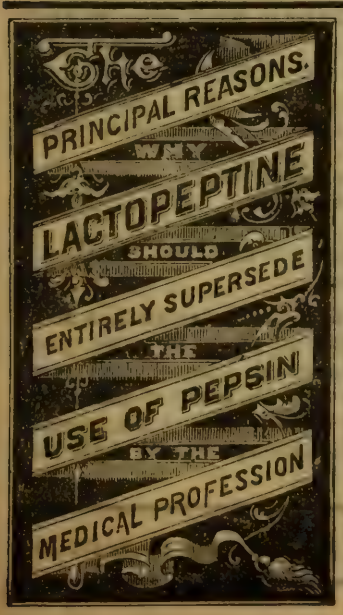

R. & C.
N.Y.
LACTOPEPTINE
DOSE:
Three to Ten Grains after Each Meal.
LACTOPEPTINE contains the five active agents of digestion—*Pepsin, Veg. Ptyalin, Pancreatine, Lactic Acid* and *Hydrochloric Acid*—combined in the same proportion as they exist in the human system. One dr will digest from 8 to 10 ozs. of either albumen, fibrin, casine or gelatine; emulsionize 16 ozs. of cod liver oil, and convert 4 ozs. of starch into glucose.
LACTOPEPTINE will be found far superior to all other remedies in Dyspepsia and kindred diseases.
Also, particularly indicated in Anemia, General Debility, Chronic Diarrhœa, Constipation, Headache, and Depraved Condition of the Blood resulting from imperfect digestion.
REED & CARNRICK,
Pharmacists,
NEW YORK.

LACTOPEPTINE, *as well as all other preparations of our manufacture, is prepared strictly for the use of the Medical Profession, and is kept invariably in their hands.*

FORMULA OF LACTOPEPTINE.

Sugar of Milk, . . .	20 *Ounces.*	*Veg. Ptyalin or Diastase*, .	1 *Drachm.*
Pepsin, ...	4 "	*Lactic Acid*, . . .	2½ *fl. Drachms.*
Pancreatine, . . .	3 "	*Hydrochloric Acid*,	2½ *fl.* "

Powder and Mix.



1st.—It will digest from three to four times more *coagulated albumen* than any preparation of Pepsin in the market.

2d.—It will emulsionize and prepare for assimilation the oily and fatty portions of food, Pepsin having no action upon this important alimentary article.

3d.—It will change the *starchy* portions of vegetable food into the assimilable form of Glucose.

4th.—It contains the natural acids secreted by the stomach (*Lactic and Hydrochloric*), without which Pepsin and Pancreatine will not change the character of coagulated albumen.

5th.—Experiments will readily show that the digestive power of the ingredients of Lactopeptine, when two or more are combined, is much greater than when separated. Thus, 4 grs. of Pepsin and 4 grs. of Pancreatine mixed, will dissolve one third more albumen than the combined digestive power of each agent separately in same length of time.

6th.—IT IS MUCH LESS EXPENSIVE TO PRESCRIBE. It dissolves nearly four times as much coagulated albumen as Pepsin, besides digesting all other food taken by the human stomach. *An ounce of Lactopeptine is, therefore, fully equal in digestive power to seven ounces of Pepsin, yet it is furnished at about the same price.*

All the Statements made in this Circular are the result of repeated and careful experiments.

The palatability and digestive power of LACTOPEPTINE has been more than doubled during the past two months, by producing several of its component parts free from all extraneous matter, and we now believe it is not susceptible of any further improvement.

Physicians who have not given LACTOPEPTINE a trial in their practice, are respectfully requested to read the following opinions of some of our leading Practitioners as to its merits as an important remedial agent.

IN ADDITION TO THE FOLLOWING RECOMMENDATIONS, WE HAVE RECEIVED OVER SEVEN HUNDRED COMMENDATORY LETTERS FROM PHYSICIANS, A LARGE NUMBER OF WHICH ENUMERATE CASES WHERE PEPSIN ALONE HAD FAILED TO BENEFIT, BUT FINALLY HAD BEEN TREATED SUCCESSFULLY WITH LACTOPEPTINE.

—oo—

The undersigned, having tested REED & CARNRICK'S preparation of Pepsin, Pancreatine, Diastase, Lactic Acid and Hydrochloric Acid, made according to published formula, and called *Lactopeptine*, find that in those diseases of the stomach where the above remedies are indicated, it has proven itself a desirable, useful and well adapted addition to the usual pharmaceutical preparations, and therefore recommend it to the profession.

NEW YORK, *April 6th*, 1875.

J. R. LEAMING, M. D.,
Attending Physician at St. Luke's Hospital.

ALFRED L. LOOMIS, M. D.,
Professor of Pathology and Practice of Medicine, University of the City of New York.

JOSEPH KAMMERER, M. D.,
Clinical Professor of Diseases of Women and Children, University of the City of New York.

LEWIS A. SAYRE, M. D.,
Professor of Orthopœdic Surgery and Clinical Surgery, Bellevue Hospital Medical College.

EDWARD G. JANEWAY, M. D.,
Professor Pathological and Practical Anatomy, and Lecturer on Materia Medica and Therapeutics, and Clinical Medicine.

SAMUEL R. PERCY, M. D.,
Professor Materia Medica, New York Medical College.

J. H. TYNDALL, M. D.,
Physician at St. Francis' Hospital.

JOSEPH E. WINTERS, M. D.,
House Physician Bellevue Hospital.

GEO. F. BATES, M. D.,
House Surgeon Bellevue Hospital.

—oo—

INEBRIATE ASYLUM, NEW YORK, March 25th, 1875.

I have carefully watched the effects of *LACTOPEPTINE*, as exhibited in this institution, for about six months, especially in the treatment of Gastritis, and it gives me pleasure to be able to say that I have found the best results from it, supplying as it does an abnormal void of nature in the secretions of the stomach.

N. KEELER MORTON, M. D.

—oo—

BRANDON, VT., March 31st, 1875.

I desire to say that I have used *LACTOPEPTINE* for a year, not only on my friends, but also in my own case, and have found it one of the most valuable aids to digestion that I have ever used.

A. T. WOODWARD, M. D.,
Late Professor of Obstetrics and Diseases of Women and Children, Vermont Med. College.

—oo—

EXTRACT FROM A REPORT UPON THE USES OF LACTOPEPTINE, BY J. KING MERRITT, M. D., FLUSHING, L. I.

About six months since I saw a notice of *LACTOPEPTINE* and its analysis in a Medical Journal, and having long ago recognized the inability of Pepsin to reach those cases in which the several processes of digestion are all more or less involved, I immediately commenced the use of *LACTOPEPTINE* in my own case. This was, in brief, an inherited, fostered, and persistent condition of General Dyspepsia, which I had treated for several years with Pepsin, finding in its use good service, although the general results were discouraging.

A large proportion of diseases are the result of imperfect digestion.

In all cases when the stomach is unable to digest and appropriate the remedies indicated, they should be combined with Lactopeptine.

The effect of *LACTOPEPTINE* on my powers of digestion has far surpassed my expectations, and its remedial qualities in numerous cases, more or less complicated, have been all that I could desire. In these cases *LACTOPEPTINE* was associated with other remedies indicated, for the purpose of facilitating their assimilation, which is so often nullified by a disordered and debilitated condition of the digestive organs.*

I will now give, in brief, an epitome of a case recovering under the use of *LACTOPEPTINE*. She was a married lady, who five years ago became afflicted with diarrhœa, which had baffled every mode of intelligent treatment. She had an intestinal flux, body much emaciated, and her entire health was greatly impaired. I treated her with *LACTOPEPTINE*, in conjunction with other remedies, many of which had been formerly used without avail. She is now rapidly recovering.

I shall only add that the more my experience, in its varied applicability, extends, the more its beneficial effects appear.

—oo—

NEWTON, IOWA, May 19th, 1875.

I have been using *LACTOPEPTINE* for several months, and after a careful trial in stomach and bowel troubles, find that it has no equal. In all cases of indigestion and lack of assimilation, it is a most splendid remedy. H. E. HUNTER, M. D.

—oo—

WEST NEWFIELD, ME., June 14th, 1875.

LACTOPEPTINE seems to be all that it is recommended to be. It excels all remedies that I have tried in aiding a debilitated stomach to perform its functions.

STEPHEN ADAMS, M. D.

—oo—

WOLCOTT, WAYNE CO., N. Y., June 29th, 1875.

From the experience I have had with *LACTOPEPTINE*, I am of the opinion that you have produced a remedy which is capable of fulfilling an important indication in a greater variety of diseases than any medicine I have met with in a practice of over 45 years.

JAMES M. WILSON, M. D.

—oo—

BROWNVILLE, N. Y., August 3d, 1875.

Some time since I received a small package of *LACTOPEPTINE*, which I have used in a case of long standing Dyspepsia. The subject is a man 40 years of age; has had this ailment over 10 years. I never had so bad a case before, and I have been practicing medicine 21 years. Your *LACTOPEPTINE* seems just the remedy he needs. He is improving finely, and can now eat nearly any kind of food without distress. I have several cases I shall take hold of as soon as I can obtain the medicine. W. W. GOODWIN, M. D.

—oo—

EDDYVILLE, WAPELLO CO., IOWA, May 5th, 1875.

I have used the *LACTOPEPTINE* in my practice for the last eighteen months, and find it to be one of our great remedies in all diseases of the stomach and bowels. I was called last fall to see a child three years old, that was almost in the last struggles of death with Cholera Infantum. I ordered it teaspoonful doses of Syrup of Lactopeptine, and in a few days the child was well. I could not practice without it. F. C. CORNELL, M. D.

—oo—

CORTLAND, DE KALB CO., ILL., August 12th, 1875.

I received recently a small package of *LACTOPEPTINE* with the request that I should try it in a severe case of Dyspepsia. I selected a case of a lady who has been a sufferer over 30 years. She reported relief after the first dose, and now, after using the balance of the package in doses of three grains, three times daily, says she has received more benefit from it than from any other remedy she had ever tried. G. W. LEWIS, M. D.

* We desire particularly to call the attention of the Profession to the great value of LACTOPEPTINE when used in conjunction with other remedies, especially in those cases in which the digestive organs are unable, from debility, to properly prepare for assimilation the remedies indicated.

One drachm of Lactopeptine will digest ten ounces of Coagulated Albumen, while the same quantity of any standard preparation of Pepsin in the market will dissolve but three ounces.

One drachm of Lactopeptine dissolved in four fluid drachms of water will emulsionize sixteen ounces of Cod Liver Oil.

CHILLICOTHE, MO., September 4th, 1874.

I have used *LACTOPEPTINE* this summer with good effect in all cases of weak and imperfect digestion, especially in children during the period of dentition, cholera infantum, &c. I regard it, decidedly, as being the best combination containing Pepsin that I have ever used. J. A. MUNK, M. D.

FORT DODGE, IOWA, November 15th, 1874.

I have fairly tried, during the past summer and fall, your *LACTOPEPTINE*, and consider it a most useful addition to the list of practical remedies. I have found it especially valuable in the *gastro-intestinal* diseases of children. W. L. NICHOLSON, M. D.

WHITE HALL, VA., January 4th, 1875.

A short time since I sent for some of your *LACTOPEPTINE*, which I used in the case of a lady who had been suffering with dyspepsia for over twelve months, and who had taken Pepsin, and other remedies usually prescribed in that disease, with very little benefit. I ordered the *LACTOPEPTINE*, and was pleased to find a decided improvement after a few days, which has steadily increased. At the present time she appears to have entirely recovered. Very truly, E. B. SMOKE, M. D.

INDIANOLA, IOWA, December 11th, 1874.

I consider the *LACTOPEPTINE* a heaven-sent remedy for all digestive troubles. I gave it to a lady troubled with exhaustive nausea and vomiting from pregnancy, with immediate and perfect relief, after all other remedies had failed. She was almost in *articulo mortis*. The third day after taking the *LACTOPEPTINE* she was able to be up. I was called in council the other day to a case of Intussusception; the patient was vomiting stercoracious matter; had retained no nutrition for several days. I gave the *LACTOPEPTINE* with immediate relief. Ingestion was retained. I relieved the bowels by inflation, got an operation, and the patient will recover. I consider the *LACTOPEPTINE* was his *sheet anchor*. I am now using the *LACTOPEPTINE* in Cancer of the Stomach—the only medicine that gives the patient any relief. It seems to act as an anodyne in his case more so than morphine. C. W. DAVIS, M. D.

CONTOCOOK, N. H., November 25th, 1874.

After a thorough trial, I believe *LACTOPEPTINE* to be one of the most important of the new remedies that have been brought to the attention of physicians during the last ten years. I have used it in several cases of vomiting of food from dyspepsia, and in the vomiting from pregnancy, with the best of success. The relief has been immediate in every instance. In some of the worst cases of Cardialgia, heretofore resisting all other treatment, *LACTOPEPTINE* invariably gave immediate relief. It has accomplished more, in my hands, than any other remedy of its class I ever met with, and I believe no physician can safely be without it. It takes the place of Pepsin, is more certain in its results, and is received by patients of all ages without complaint, being a most pleasant remedy. I have used *LACTOPEPTINE* in my own case, having been troubled with feelings of weight in the stomach and distress after eating, but always have obtained immediate relief upon taking the elixir in teaspoonful doses. GEORGE C. BLAISDELL, M. D.

MO. VALLEY, IOWA, November 12th, 1874.

Some months since I saw in a medical journal a notice of your *LACTOPEPTINE*. Having in charge a patient in whose case I thought it was indicated, I prescribed it in 5 gr. doses. He used it about a week and was greatly benefited. I failed to procure more just then, so I gave him Pepsin instead, the patient thinking it to be the same prescription. After two days he returned to my office, saying that "the last medicine didn't hit the spot, but that which you gave me last week was just the thing, and has given me more relief than any medicine I have ever taken." I consider this a fair test (so far as it goes) of the merits of this new, and I think, invaluable remedy. G. W. COIT, M. D.

One drachm of Lactopeptine will transform four ounces of Starch into Glucose.

Pancreatine and Diastase are more important digestive agents than Pepsin.

COMMUNICATIONS FROM MEDICAL JOURNALS.

We have for several months been prescribing various preparations of medicine containing *LACTOPEPTINE* as an important aid to digestion. It may be advantageously combined with cod liver oil, calisaya, iron, bismuth, quinine and strychnia. *LACTOPEPTINE* is composed of pepsin, ptyalin, pancreatine, lactic acid and hydrochloric acid—pepsin, lactic and hydrochloric acids being in the gastric juice, ptyalin in the saliva, and pancreatine emulsionizing fatty substances. The theory of its action being rational, we have prescribed the various preparations referred to above with more evidence of benefit than we ever observed from pepsin.—*St. Louis Medical and Surgical Journal*, September, 1874.

AN ARTICLE ON LACTOPEPTINE, BY LAURENCE ALEXANDER, M. D., OF YORKVILLE, S. C., IN THE *ATLANTA MEDICAL AND SURGICAL JOURNAL*, NOVEMBER, 1874.

Some time ago a small box, labelled "Physicians' Samples *LACTOPEPTINE*," was placed in my hands, with the request that I would give it a trial upon some one suffering from dyspepsia. Having, like other physicians, a large *per centum* of just such cases always on hand, in which various medicines and remedies had been used without success, I gladly consented, hoping that something had really been found at last to supply the want felt by every practitioner in the treatment of this troublesome complaint. After several months' experience in the use of this preparation, in which it has been thoroughly tested upon a large number of patients with such gratifying results, I am induced to recommend it to the consideration of the profession, feeling confident that, with due care in their diagnosis, and the many little cautions always necessary, such as restricting the excessive use of fluids while eating, etc., and a little patience on the part of the sufferer, its good effects will be seen beyond a doubt.

While I employ it extensively in many deranged conditions of the bowels incident to infancy and childhood, I find it equally efficacious in constipation and all diseases arising from imperfect nutrition in the adult. In sickness of pregnancy it answers well, far exceeding, in my hands, oxalate of cerium, extract lupulin, or the drop doses of carbolic acid, so highly extolled by some practitioners. In its combination with iron, quinine and strychnia, we have the advantage of using, in cases of great nervous depression and debility peculiar to the dyspeptic, our most valuable agent in a truly elegant form.

TO TEST THE DIGESTIVE POWER OF LACTOPEPTINE IN COMPARISON WITH ANY PREPARATION OF PEPSIN IN THE MARKET.

To five fluid ounces of water add one drachm of Lactopeptine, half drachm of Hydrochloric Acid, 10 ounces Coagulated Albumen, allowing it to remain from two to six hours at a temperature of 105 deg., agitating it occasionally.

Lactopeptine is prepared in the form of Powder, Sugar Coated Pills, Elixir, Syrup, Wine and Troches.

LACTOPEPTINE is also combined with the following preparations:

EMULSION OF COD LIVER OIL WITH LACTOPEPTINE.

This combination will be found superior to all other forms of Cod Liver Oil in affections of the Lungs and other wasting diseases. Used in Coughs, Colds, Consumption, Rickets, Constipation, Skin Diseases and Loss of Appetite.

The Oil in this preparation being partly digested before taken, will usually agree with the most debilitated stomach. Although we manufacture seven other preparations of Cod Liver Oil, we would recommend the above as being superior to either of them. It is very pleasant to administer, compared with the plain Oil, and will be readily taken by children.

EMULSION OF COD LIVER OIL WITH LACTOPEPTINE AND LIME.

Each ounce of the Emulsion contains 16 grs. Lactopeptine and 16 grs. Phosphate Lime.

ELIXIR LACTOPEPTINE.

The above preparation is admirably adapted in those cases where Physicians desire to prescribe Lactopeptine in its most elegant form.

REED & CARNRICK manufacture a Full Line of Fluid Extracts.

BEEF, IRON AND WINE WITH LACTOPEPTINE.

In those debilitated dyspeptic cases when an Iron Tonic, combined with the strengthening properties of Extract of Beef and Wine are indicated, this preparation will be found most efficacious.

ELIXIR PHOSPHATE OF IRON, QUININE AND STRYCHNIA WITH LACTOPEPTINE.

There can be no combination more suitable than the above in cases of Nervous and General Debility, attended with Dyspepsia.

ELIXIR LACTOPEPTINE, STRYCHNIA AND BISMUTH.

A valuable combination in cases of Dyspepsia, attended with nervous debility.

ELIXIR GENTIAN AND CHLORIDE OF IRON WITH LACTOPEPTINE.

An elegant and reliable remedy in cases of Dyspepsia attended with General Debility.

SYRUP LACTOPEPTINE COMP.

Each ounce contains 24 grains Lactopeptine, 8 grains Phosphate of Iron, 8 grains Phosphate Lime, 8 grains Phosphate Soda, and 8 grains Phosphate Potash.

This preparation will be found well suited to cases of General Debility, arising from impaired digestion, and also of great value in Pulmonary Affections.

FORMULÆ.

The following valuable formulæ have been contributed by J. KING MERRITT, M. D., *who has used them with great success in his practice:*

No. 1.—FOR INTERMITTENT FEVER WITH CONGESTION OF LIVER.

℞			
	Liquid Lactopeptine,		dr. vi.
	Fl. Ex. Cinchona Comp.,		dr. i.
	Fl. Ex. Taraxacum,		
	Tinct. Zingiber,	aa	dr. iii.
	Hydrochloric Acid Dilut.,		dr. i.
	Spts. Lavender Comp.,		dr. ii.
	Sulphate Quinia,		grs. xl.

M. *Dose.*—One teaspoonful every two or three hours.
SIG.—Quinine mixture or tonic mixture.

REMARKS.

This mixture should be taken every two hours in the case of a quotidian attack, as soon after the subsidence of the paroxysms as the stomach will accept it, or even during the sweating stage, if the stomach is not especially irritable, and should be continued until the hour of anticipated paroxysms at the same rate, except during the night, from 10 P. M. to 4 A. M., as a general rule. Six to eight doses to be taken during the first interval, and if the attack does not recur, then continue the mixture daily for one week, at a rate diminished by one hour each day.

No. 2.—FOR INTERMITTENT FEVER WITH IRRITABLE STOMACH.

℞		
	Liquid Lactopeptine,	dr. vi.
	Fl. Ex. Cinchona Comp.,	dr. i.
	Tinct. Zingiber,	dr. iii.
	Spts. Lavender Comp.,	dr. v.
	Aromatic Sulphuric Acid,	dr. i.
	Essence Menth. Pip. or Gaultheria,	gtts. x.
	Sulphate Quinia,	grs. xl.

M. *Dose.*—One teaspoonful with water *ad libitum* every two or three hours, as in Formula No. 1, and in accordance with the type of the attack. Begin at the rate indicated;

that is, if "Tertian," every three hours, and then after first interval, if the paroxysm does not recur, continue mixture at a diminished rate each succeeding day, as indicated in remarks appended to Formula No. 1, to wit, by increasing the period of time between each dose of medicine an hour every day until a week has passed, when the frequency of dose will be reduced to three times a day, at which rate it should be continued until complete restoration of appetite and strength.

No. 3.—FOR MALARIAL DYSPEPSIA.

℞	Liquid Lactopeptine,		dr. fl. vi.
	Fl. Ex. Cinchona Comp.,		
	Tinc. Nux Vomica,	aa	dr. xi.
	Spts. Lavender Comp.,		oz. ss.
	Hydrocyanic Acid Dilut.,		dr. ss.
	Syr. Aromatic Rhubarb,		oz. ss.
	Sulphate Quinine,		dr. ss.

M. *Dose.*—One teaspoonful with water *ad libitum* at meals (before or after), and *at bed time if required;* also, use in addition after the meals full doses of Pulv. Lactopeptine with Spts. Lavender Comp. and Lime Water, *in case the patient should suffer from positive signs of indigestion, although the dose of Formula No.* 3 *has already been taken at the meal time,* either immediately before or after eating, in accordance with the rule or foregoing instruction.

No. 4.—FOR CHRONIC DIARRHŒA.

℞	Liquid Lactopeptine,	dr. vi.
	Liq. Opii Comp. (Squibbs'),	dr. iii.
	Nitric Acid Dilut.; or, Aqua Regia Dilut.,	dr. i.
	Syr. Aromatic Rhubarb,	dr. ii.
	Pulv. Nit. Bismuth,	dr. ss.
	Aqua Camph.,	oz. ss.

M. *Dose.*—One teaspoonful with water after each flux from bowels, and as a rule, at bed time, even if the diarrhœa is apparently checked at that hour, and *this rule* should be *persisted in* for two or three days, or until the diarrhœal tendency has been entirely subdued.

PEPSIN—PANCREATINE—DIASTASE.

In addition to *LACTOPEPTINE* we manufacture PEPSIN, PANCREATINE and DIASTASE. They are put up separately in one ounce and pound bottles.

They will be found equal in strength with any other manufacture in the world.

They are all presented in a saccharated form, and are therefore very palatable to administer.

COMP. CATHARTIC ELIXIR.

The only pleasant and reliable Cathartic in liquid form that can be prescribed.

Each fl. oz. contains:

Sulph. Magnesia,	1 dr.
Senna,	2 "
Scammony,	6 grs.
Liquorice,	1 dr.
Ginger,	3 grs.
Coriander,	5 "

With flavoring ingredients.

Dose.—Child five years old, one to two teaspoonfuls; adult, one to two tablespoonfuls.

This preparation is being used extensively throughout the country. It was originated with the design of furnishing a liquid Cathartic remedy that could be prescribed in a palatable form. It will be taken by children with a relish.

MAINE INSANE HOSPITAL, AUGUSTA, Feb. 25th, 1875.

I am happy to say that we are much pleased with the Compound Cathartic Elixir. It has, so far, proved the best Liquid Cathartic we have ever used in our Institution. It acts effectively and kindly, without irritation or pain. H. M. HARLOW, M. D.

Private Formulas of Pills or other preparations made to order.

Strychnia Compound Pill.

Strychnia,	1-100 grain.
Phosphorus,	1-100 "
Ex. Cannabis Indica,	1-16 "
Ginseng,	1 "
Carb. Iron,	1 "

Dose.—One to two.

A reliable and efficient Pill in Anaphrodisia, Paralysis, Neuralgia, Loss of Memory, Phthisis, and all affections of the Brain resulting from Loss of Nerve Power.

Price, 80 cents per hundred.

Sent by mail, prepaid, on receipt of price.

Hæma, Quinia and Iron Pill.

Ext. Blood,	2 grains.
Quinine Sulph.,	1 grain.
Sesqui Oxide Iron,	1 "

Dose.—One to three.

Price, $2.00 per hundred.

Sent by mail, prepaid, on receipt of price.

HÆMA PILLS.

We beg to present to the Medical Profession for their special consideration our several preparations of Blood Pills. The use of Blood medicinally, and the importance of its administration in a large class of diseases, has arrested the attention of many of the leading Physicians of Europe, and has received their warmest attestation. Prominent among these may be mentioned Prof. Panum, of the University of Copenhagen, who is using it with great success in the hospital of that city.

At the abattoir in this city, Boston, and in every part of the country, there can be seen numerous persons afflicted with Pulmonary Affections, Chlorosis, Paralysis, Anemia, and other ailments, who are daily drinking the blood of the ox, and many with more benefit than they have derived from any other source.

The blood used by us being *Arterialized Male Bovine only*, is secured as it flows from the animal in a vacuum pan, and the watery portion (85 per cent.), eliminated at a temperature not exceeding 100° F., the remaining mass, containing every constituent of the blood, being the base of our preparations.

HÆMA (Ext. Blood), 4 grs.

Dose.—Two to four.

90 cts. per hundred.

HÆMA COMP.

Ext. Blood, 2 grs.
Lacto-Phosphate Lime, 1 gr.
Pepsin, 2 gr.

Dose.—One to three.

$1.50 per hundred.

HÆMA, QUINIA, IRON AND STRYCHNIA,

Ext. Blood, 2 grs.
Quinine Sulph., 1 gr.
Sesqui Oxide Iron, 1 gr.
Strychnine, 1-75 gr.

Dose.—One to three.

$2.00 per hundred.

Samples sent to Physicians, postage prepaid, on receipt of price.

LACTOPEPTINE and most of our leading preparations can be obtained from the principal Druggists of the United States.

SUGAR COATED PILLS, TROCHES AND POWDERS CAN BE SECURELY SENT BY MAIL.

Price of LACTOPEPTINE by Mail.

One ounce sent by mail, prepaid, on receipt of	$1 00
One pound " " " " "	13 00

A fraction of an ounce or pound sent by mail on receipt of corresponding price.

We guarantee all goods of our manufacture.

In ordering, please designate R. & C.'s manufacture.

Send for PRICE LIST, DOSE BOOKS and DISCOUNTS.

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N.B.—Test of purity, insoluble in Price's glycerine
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CINCHO-QUININE.

It is a combination of *all* the active medicinal principles of the best Calisaya Bark, and after the prolonged and thorough testing it has had, it stands unrivalled as a prompt, safe, and uniformly reliable antiperiodic, possessing all the advantages, with none of the disadvantages, of Sulphate of Quinine.

Cincho-Quinine contains no external agents, as sugar, liquorice, starch, magnesia, etc. *It is wholly composed of the bark alkaloids:* 1st, quinia; 2d, cinchonia; 3d, quinidia; 4th, cinchonidia; 5th, the other alkaloidal principles present in barks, which have not been distinctly isolated, and the precise nature of which is not well understood. In the beautiful white amorphous scales of Cincho-Quinine the whole of the active febrifuge and tonic principles of the cinchona barks are secured without the inert, bulky lignin, gum, etc.

The following well known Analytical Chemists say:

UNIVERSITY OF PENNSYLVANIA, Jan. 22, 1875.

"I have tested Cincho-Quinine, and have found it to contain *quinine, cinchonine* and *cinchonidine*." F. A. GENTH, Prof. of Chemistry & Mineralogy.

"I have made a careful analysis of Cincho-Quinine, and find it to contain *quinine, quinidine, cinchonine* and *cinchonidine*."
S. P. SHARPLES, State Assayer of Mass.

LABORATORY OF THE UNIVERSITY OF CHICAGO, Feb. 1, 1875.

"—I made a qualitative examination for *quinine, quinidine* and *cinchonine* and hereby certify that I found these alkaloids in Cincho-Quinine."
C. GILBERT WHEELER, Professor of Chemistry.

KANSAS CITY, MISSOURI.

When Cincho-Quinine was first presented to the public, I analyzed it, and found it to contain the principles of the bark as represented. Since that time I have never used one grain of sulphate of quinine, and never expect to, as it fulfils all the indications for its use without the unpleasant symptoms which always have rendered, and will render the sulphate objectionable, more particularly with children. I presume I have as many cases as any other practitioner in this vicinity, and have had ample opportunities for testing its virtues. Its price renders it also valuable, but I must state candidly, that if the price was more than the sulphate, I would then buy it, and pay even double, if I could not obtain it at a less rate.

G. E. HEYDON, M.D.,
Analytical and Technical Chemist, Kansas City, Mo

HEMPSTEAD, NEW YORK.

I have used your Cincho-Quinine for several years; have found it answers the purpose for which it was given. I prefer it much to the sulphate, and have taken considerable of it myself.

G. N. SEARING, M.D.

It is believed to have these advantages over sulphate of quinine:

1st. It exerts the full therapeutic influence of sulphate of quinine, in the same doses, without oppressing the stomach or creating nausea. It does not produce cerebral distress, as sulphate of quinine is apt to do; and in the large number of cases in which it has been tried, it has been found to produce much less constitutional disturbance.

2d. *It has the great advantage of being nearly tasteless.* The bitter is very slight, and not unpleasant to the most sensitive, delicate woman or child.

3d. It is less costly than sulphate of quinine. As in the case of that salt, the price will fluctuate with the rise and fall of barks, but we shall supply it at all times at less than the lowest market price of the sulphate.

4th. It meets indications not met by the sulphate.

☞ **We will send a sample package for *trial*, containing fifty grains of Cincho-Quinine, on receipt of twenty-five cents, post-paid. Special prices given for orders amounting to one hundred ounces and upwards.**

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